

**ARCHIVE**

This information was updated on January 23, 2018. SHIMANO makes no warranty with respect to this information, including without limitation any warranty on the accuracy of measures, specifications and compatibility of the current products. Regarding any modification and new product information after January 23, 2018, please refer to the SHIMANO Business Customer Web Site or directly contact the sales person of our company.

**SHIMANO**

**2017-2018**

**Products compatibility Information**

Compatibilities are subject to change without prior

# Word definitions

<b>BB</b>	Bottom bracket	<b>HP</b>	Head parts
<b>BC</b>	Brake cable	<b>HRB</b>	Hub roller brake
<b>BCC</b>	Battery cable	<b>I-SPEC</b>	Integration mounting system of brake and shifting lever
<b>BCR</b>	Battery charger		
<b>BH</b>	Disc brake hose	<b>ID</b>	CI-DECK
<b>BL</b>	Brake lever	<b>JC</b>	Junction
<b>BM</b>	Battery mount	<b>LP</b>	Light
<b>BR</b>	Brake caliper	<b>MF</b>	Multiple freewheel
<b>BTC</b>	Battery case	<b>MU</b>	Motor unit
<b>BTH</b>	Battery holder	<b>O.L.D.</b>	Over Locknut Dimension
<b>BTR</b>	Battery	<b>OT</b>	Outer casing
<b>CB</b>	Coaster brake	<b>P.C.D.</b>	Pitch Circle Diameter
<b>CD</b>	Chain device	<b>PCE</b>	PC Linkage device
<b>CG</b>	Chain guard	<b>PD</b>	Pedal
<b>CJ</b>	Cassette joint	<b>PM</b>	POWER MODULATOR
<b>CN</b>	Chain	<b>QR</b>	Quick release
<b>CP</b>	Spoke protector	<b>RD</b>	Rear derailleur
<b>CR</b>	Chainring	<b>RT</b>	Disc brake rotor
<b>CS</b>	Cassette sprocket	<b>RTAD</b>	Disc brake rotor adapter
<b>CT</b>	Chain tensioner	<b>SB</b>	REVOSHIFT shifter integrated with brake lever
<b>DH</b>	Hub dynamo		
<b>DU</b>	Drive unit	<b>SC</b>	Cycle computer System information display
<b>EC</b>	Battery charger		
<b>EW</b>	Electric wire	<b>SF</b>	Single free
<b>EWC</b>	Cord cover	<b>SG</b>	Internal geared hub
<b>EWEX</b>	DI2 adapter	<b>SL</b>	Shifting lever
<b>EWW</b>	Wireless unit	<b>SPD</b>	SHIMANO PEDALING DYNAMICS
<b>FC</b>	Crankset	<b>SPD-SL</b>	SHIMANO PEDALING DYNAMICS-SL
<b>FD</b>	Front derailleur	<b>ST</b>	DUAL CONTROL LEVER / shifting lever integrated with brake lever
<b>FH</b>	FREEHUB		
<b>GM</b>	Grommet	<b>SW</b>	Switch
<b>HB</b>	Front hub	<b>WH</b>	Wheel

# Compatibility

## Drivetrain for MTB components C-432

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C-471

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Spoke protector

C-491

MTB

C-299

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C-300

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C-302

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C-473

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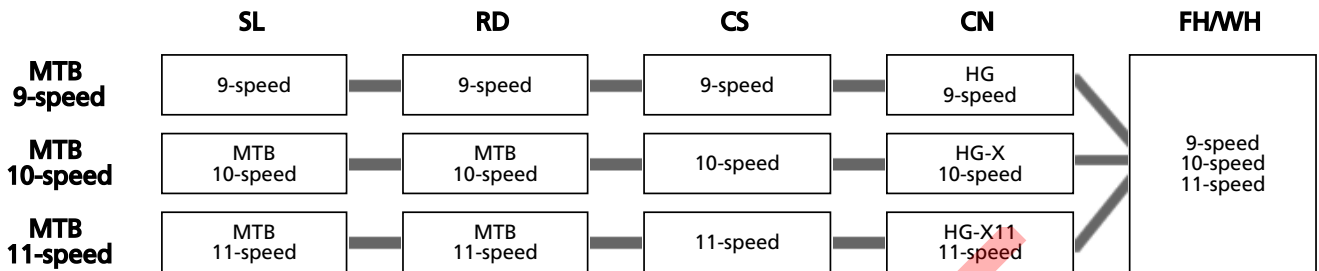
Compatibility between Bracket and ID/SC

C-548

## Rear drivetrain compatibility [MTB]

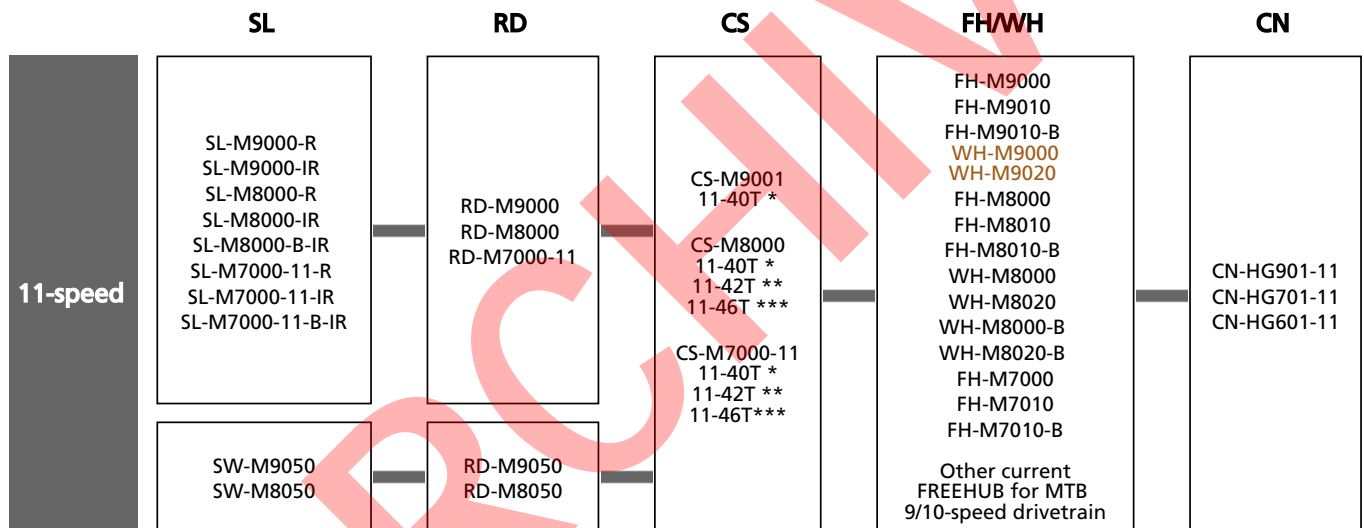
C-433

### 9,10,11-speed rear drivetrain compatibility C-434



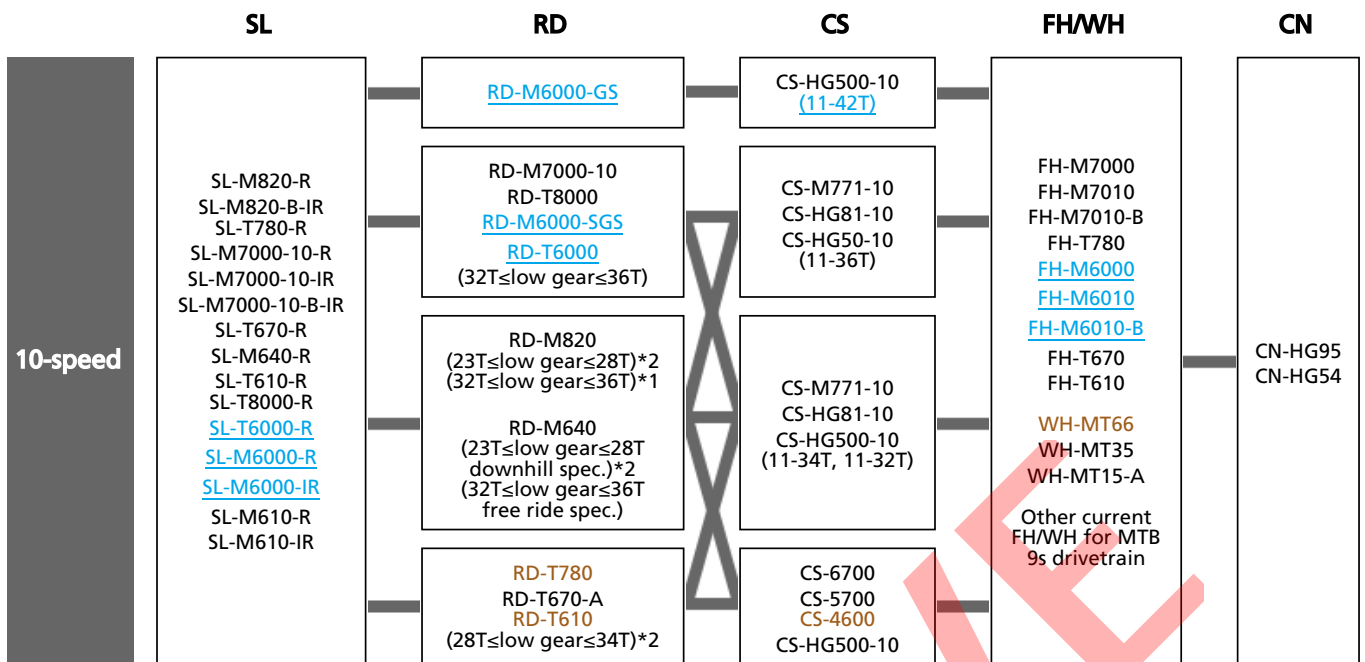
### 11-speed rear drivetrain [MTB] C-435

XTR M9000 / DEORE XT M8000 / SLX M7000 Series



\* 3/2/1x11-speed drive train  
 \*\* 2/1x11-speed drive train  
 \*\*\* Only for 1x11-speed drivetrain

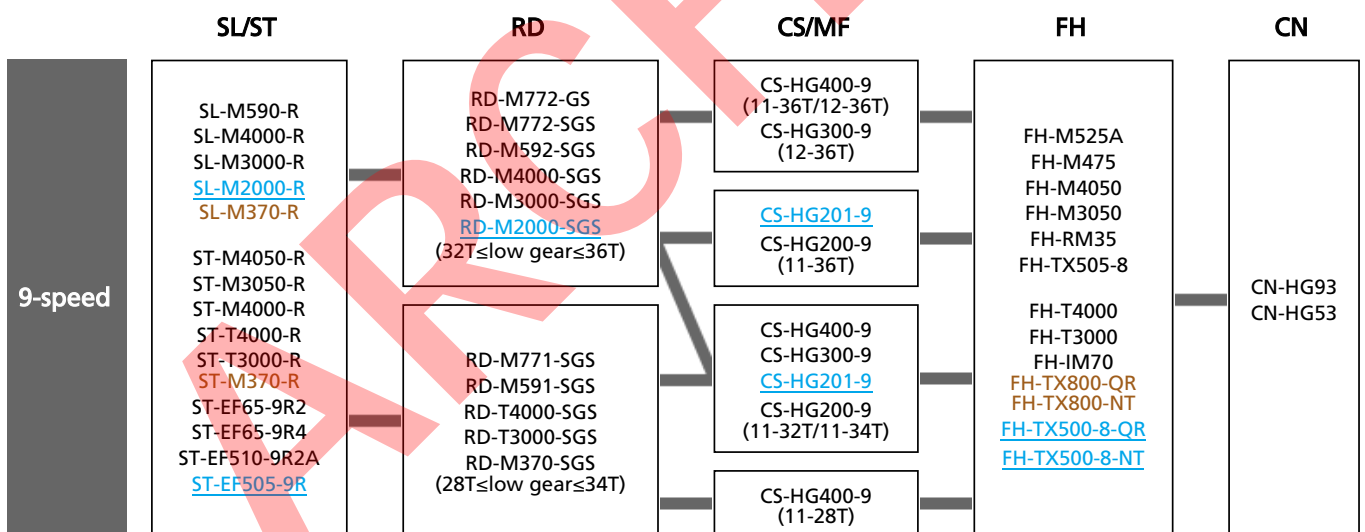
## 10-speed rear drivetrain [MTB] C-436



\*1 Mode converter

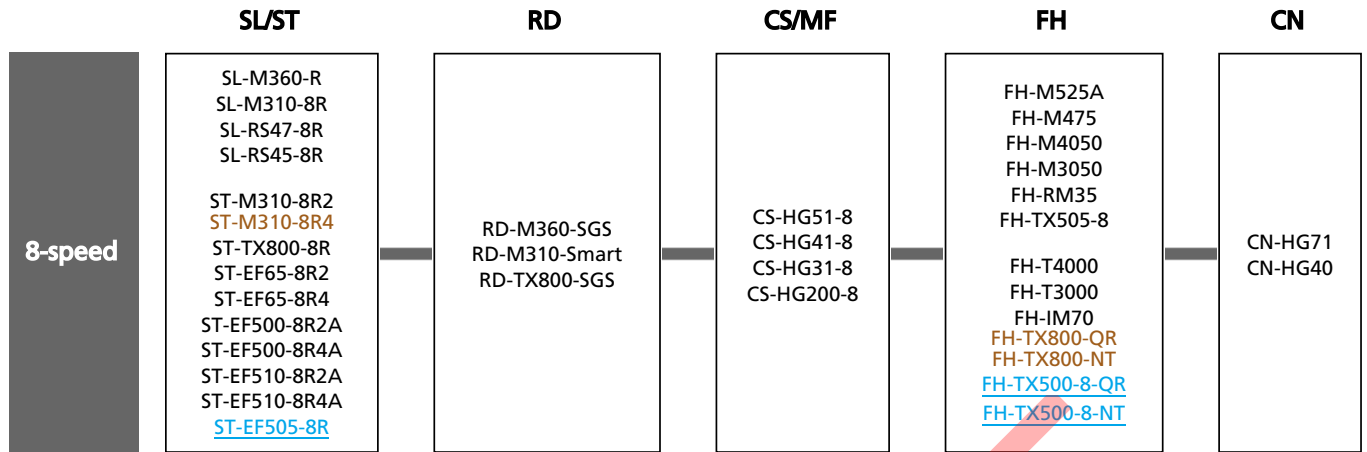
\*2 Compatible with road Cassette sprocket

## 9-speed rear drivetrain [MTB] C-437

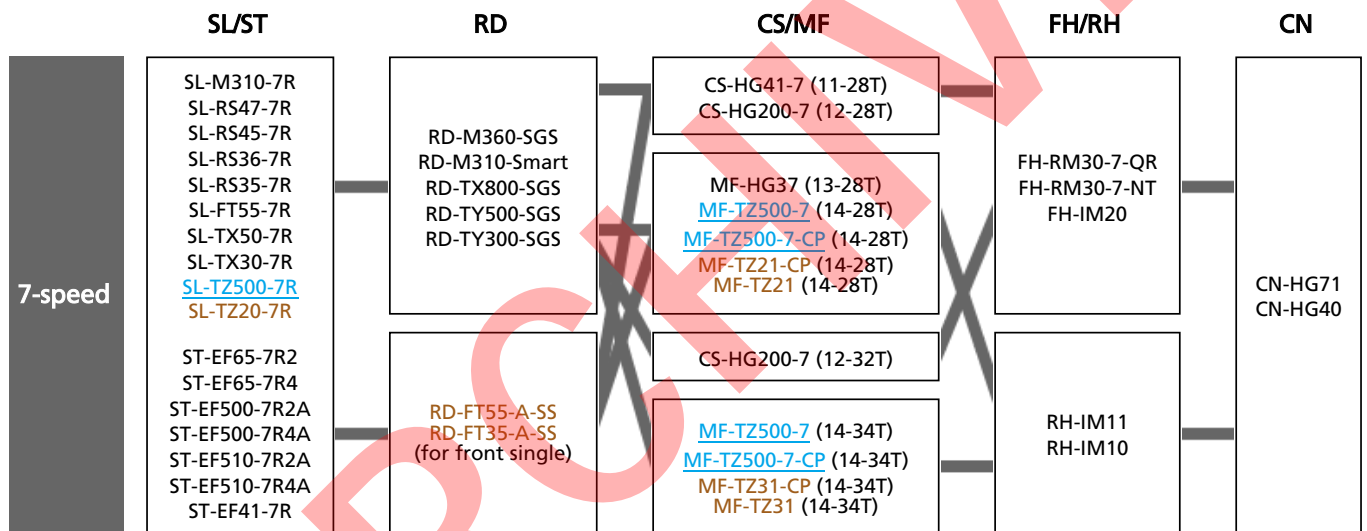


## 8-speed HG [MTB] C-438

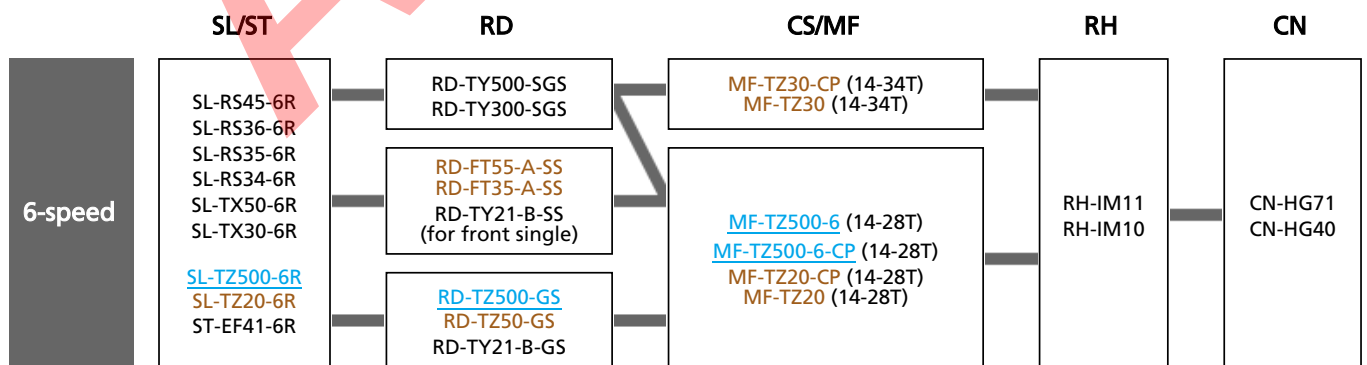
The rear derailleur for 8-speed can also be used for 7-speed drivetrain.



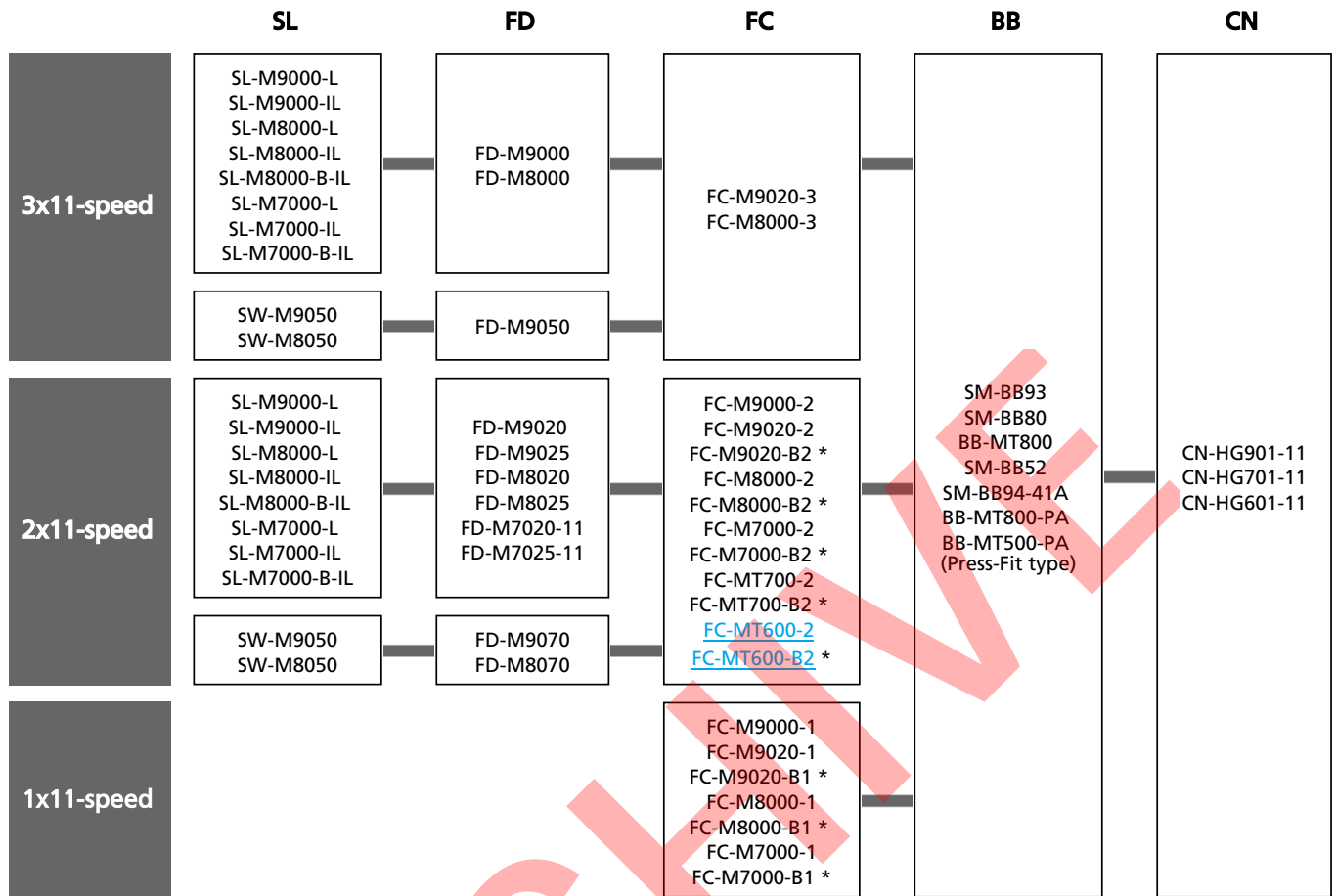
## 7-speed HG [MTB] C-439



## 6-speed HG and 6-speed [MTB] C-546



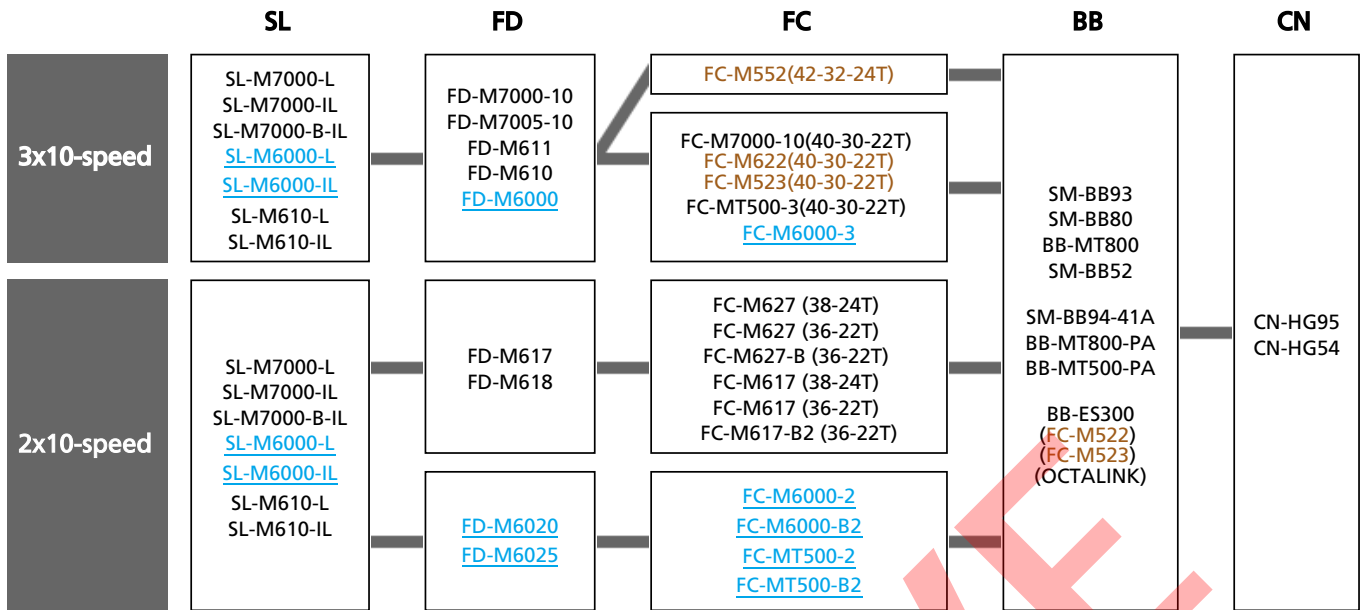
## 11-speed front drivetrain C-441



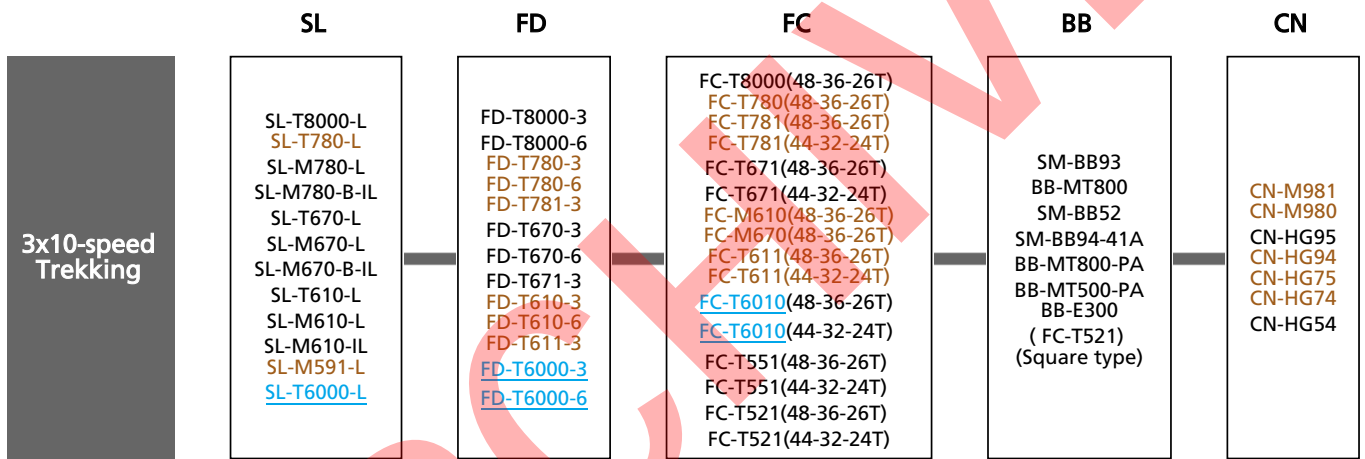
**NOTE**  
\* It also requires new dimension of frame which cassette position is 3mm outboard.



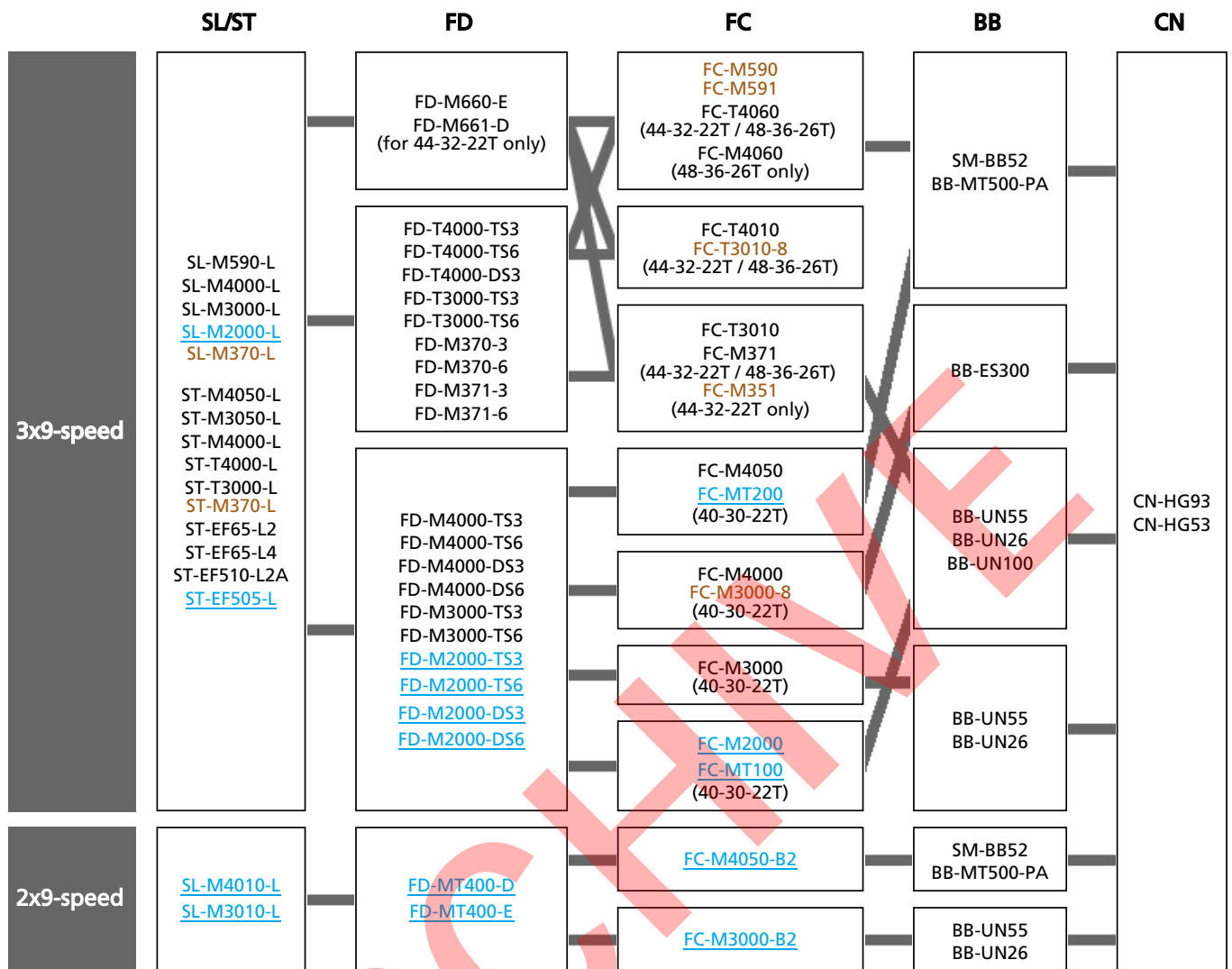
# 10-speed front drivetrain [MTB] C-442



\*: Not compatible with E2 type front derailleur.

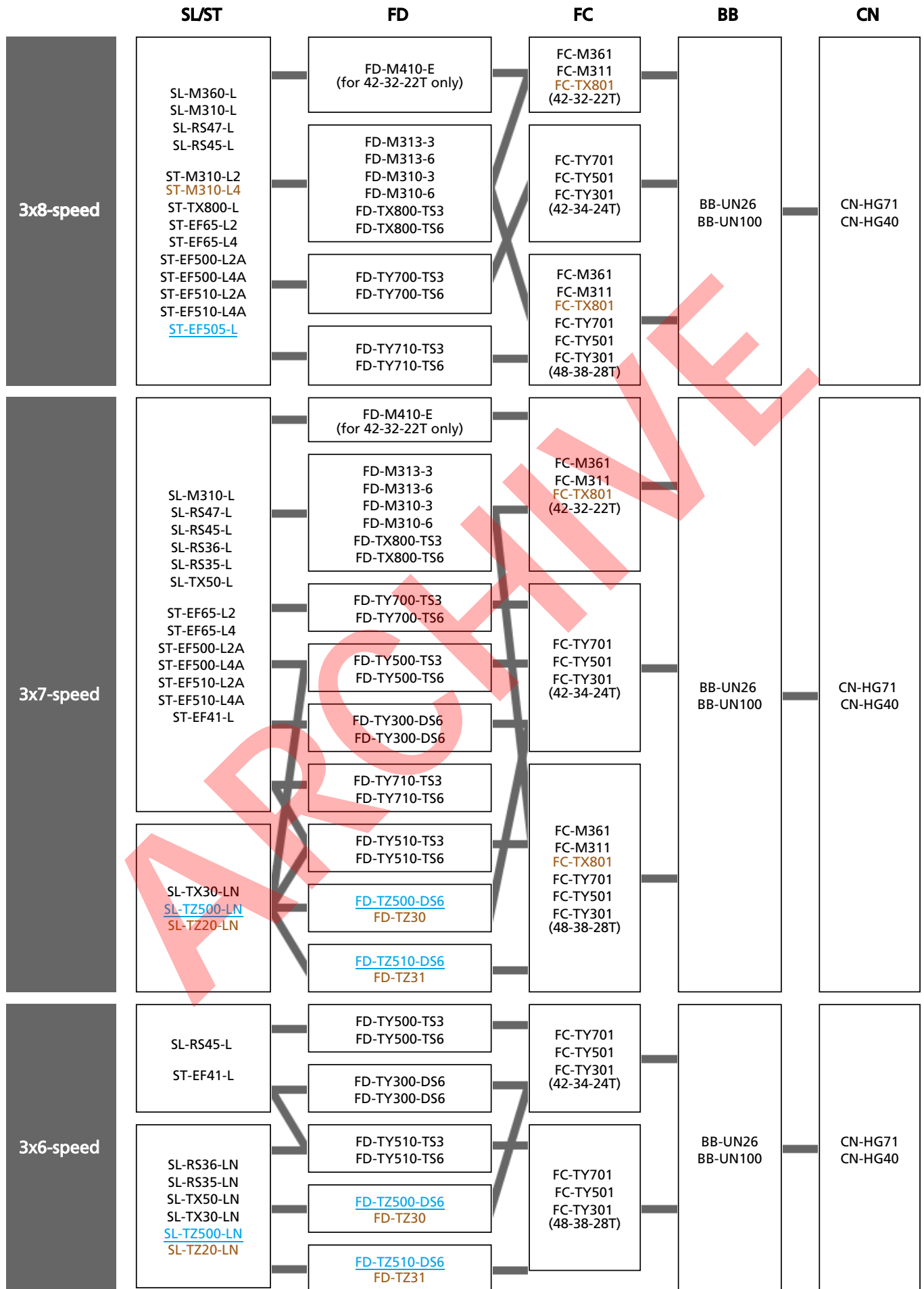


# 9-speed FC-FD compatibility [MTB] C-445



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# 8,7,6-speed triple FC-FD compatibility [MTB] C-446



## Front derailleur and crankset

C-447

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.

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

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

## Front derailleur and chain line (TOURNEY)

C-448

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-TY300	47.5		50.0
	<a href="#">FD-TZ510-DS6</a> <a href="#">FD-TZ500-DS6</a>	47.5		-
	FD-TZ31 FD-TZ30			

## Crankset, bottom bracket and chain line [MTB]

C-449

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.

### Separate type FC-BB compatibility [MTB] C-450

Speed	Series	Model No.	Crankset			Bottom bracket Model No.	Chain line and axle mark			
			Type of crank				47.5 mm	50.0 mm	52.5 mm	47.5+t mm
			OCTALINK	Square	Chain case					
10	SHIMANO	FC-M523	X	-	-	BB-ES300	-	118	-	-
		FC-M522	X	-	-	BB-ES300	-	113	-	-
9	SHIMANO	FC-M521	X	-	X*	BB-ES300-AK	-	**	-	-
	ALIVIO	FC-M4000	X	-	-	BB-ES300	-	118	-	-
		FC-T4010	X	-	X*	BB-ES300(-K)	-	126(-K)	-	-
		FC-M430-8	X	-	-	BB-ES300(-E)	-	118(-E)	-	-
		FC-M430	-	X	-	BB-UN26(-E)	-	LL113(-E)	-	-
	ACERA	FC-M3000-8	X	-	-	BB-ES300	-	118	-	-
		FC-M3000	-	X	-	BB-UN26	-	LL113	-	-
		<a href="#">FC-M3000-B2</a>	-	X	-	BB-UN26	-	LL113	-	-
		FC-T3010-8	X	-	X*	BB-ES300(-K)	-	126(-K)	-	-
		FC-T3010	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
	ALTUS	<a href="#">FC-M2000</a>	-	X	-	BB-UN26 BB-UN100	-	LL123(-K)	-	-
	SHIMANO	<a href="#">FC-MT100</a>	-	X	-	BB-UN26 BB-UN100	-	LL123	-	-
		FC-M371	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
FC-M351		-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-	
8, 7	ACERA ALTUS	FC-M361 FC-M311	-	X	X*	BB-UN26(-K)	-	LL123(-K)	-	-
	TOURNEY	FC-TX801	-	X	X*	BB-UN26(-K) BB-UN100(-K)	-	LL123(-K)	-	-
8, 7, 6	SHIMANO	FC-TY701 FC-TY501 FC-TY301	-	X	X	BB-UN26(-K) BB-UN100(-K)	D-NL(122.5)	-	-	D-NL-K (122.5)

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

\*\* : Please refer to [C-445](#) for detailed combination.

X: Yes

### NOTE

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

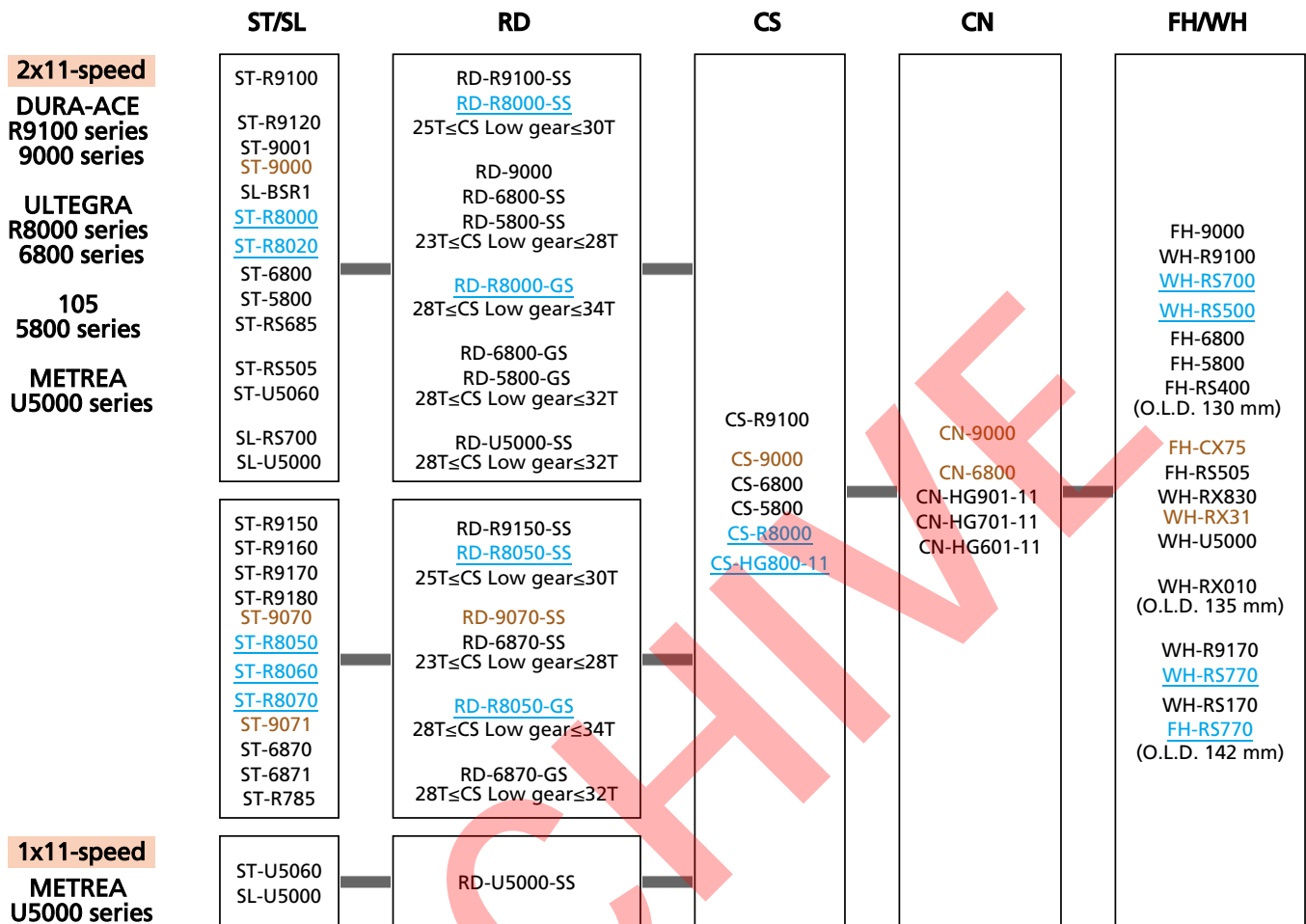
If using an E-type front derailleur, select a BB-xxxx (-E) bottom bracket.

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

# Drivetrain for ROAD bike / URBAN SPORT components

## Rear drivetrain compatibility [ROAD, URBAN SPORT]

C-454



**2x10-speed**

**ULTEGRA  
6700 series**

**105  
5700 series**

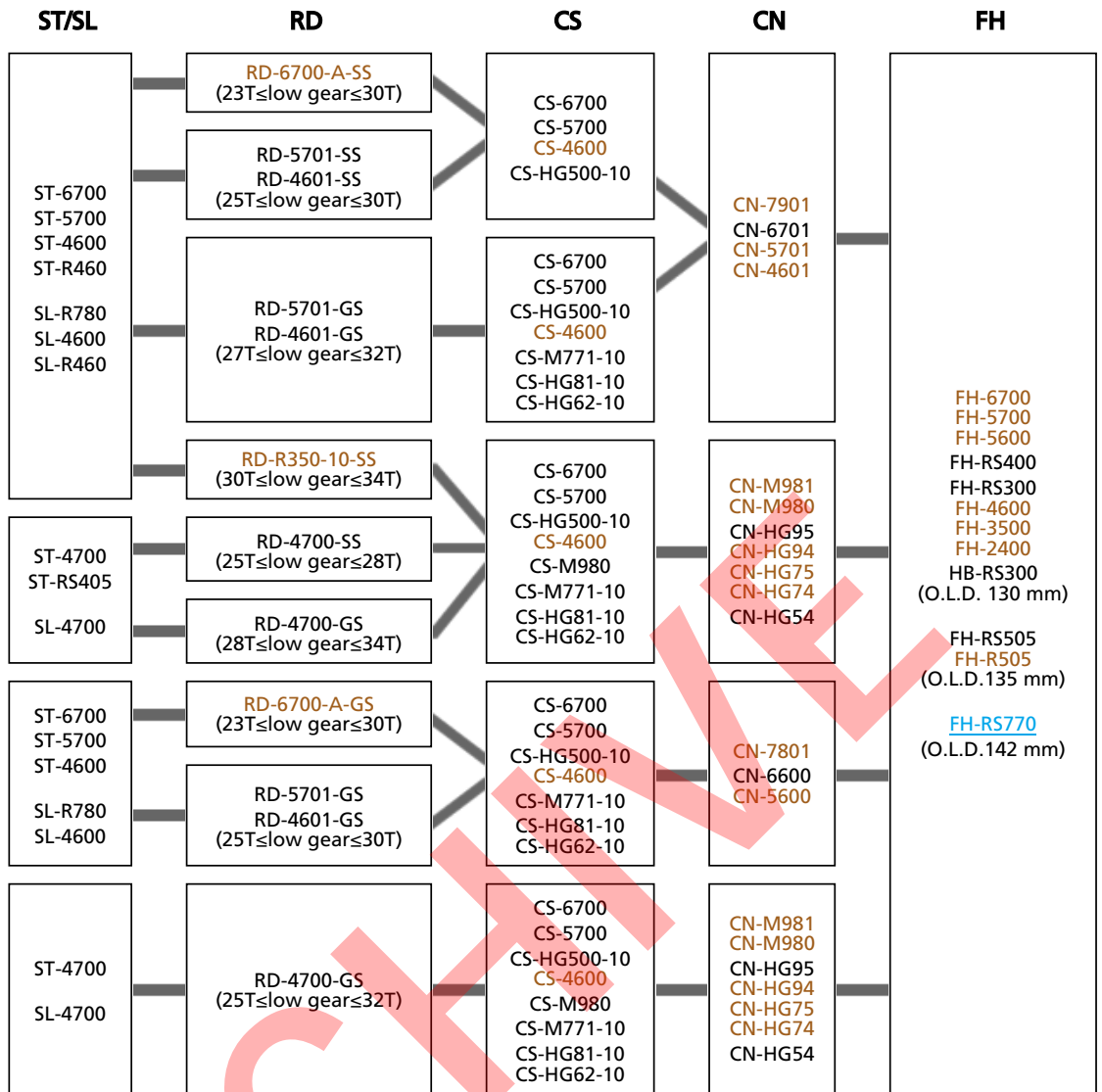
**TIAGRA  
4700 series  
4600 series**

**3x10-speed**

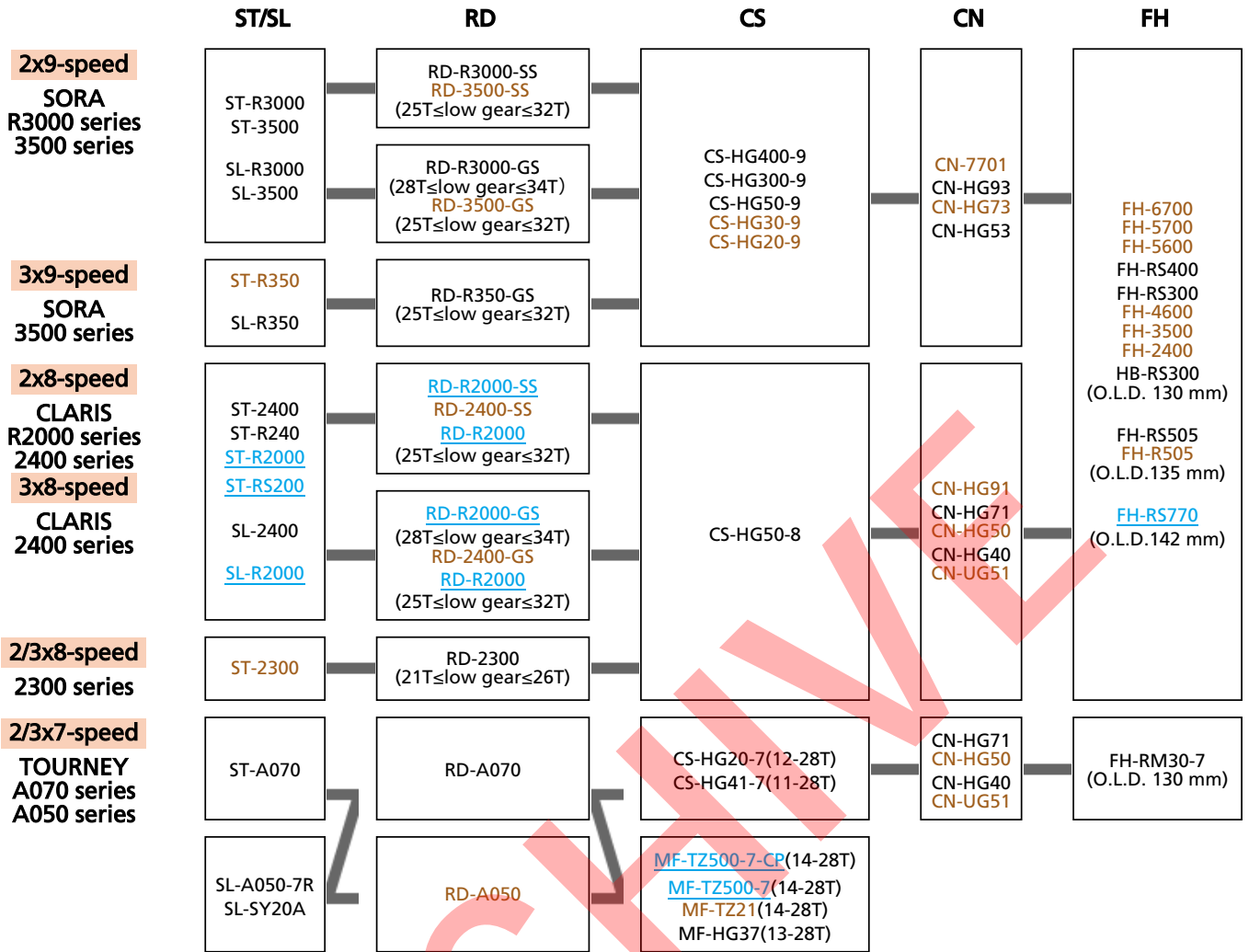
**ULTEGRA  
6700 series**

**105  
5700 series**

**TIAGRA  
4700 series  
4600 series**

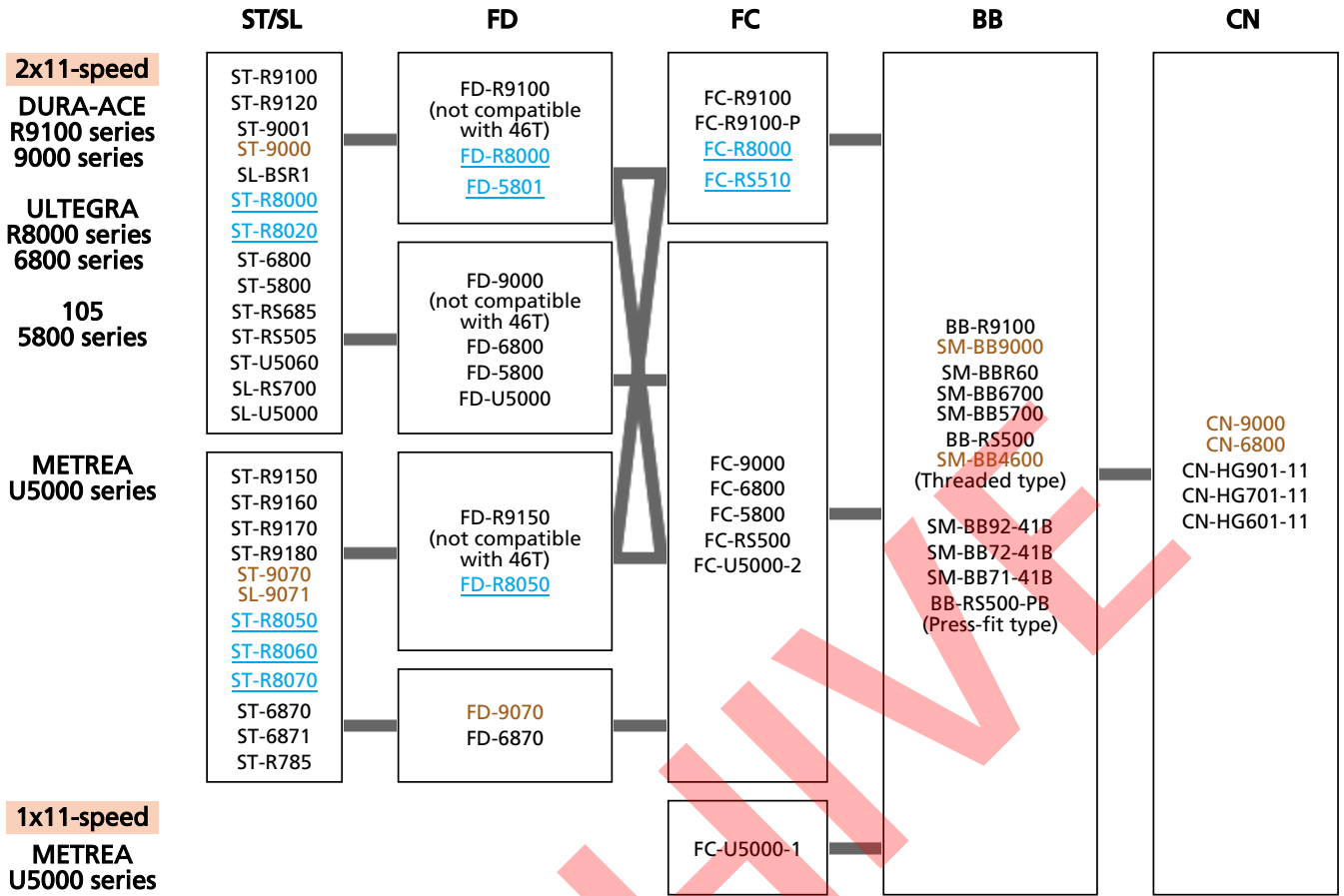


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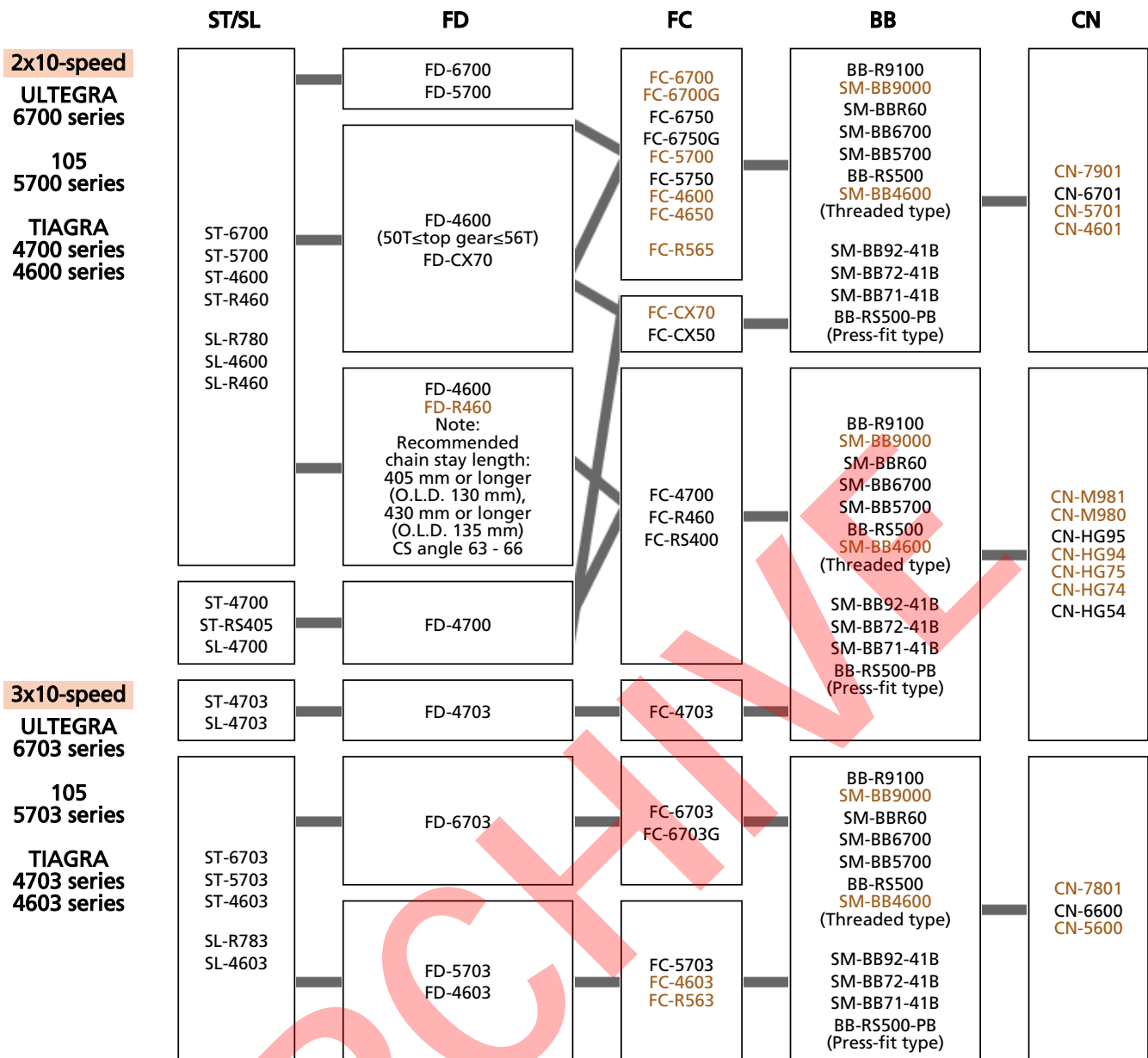


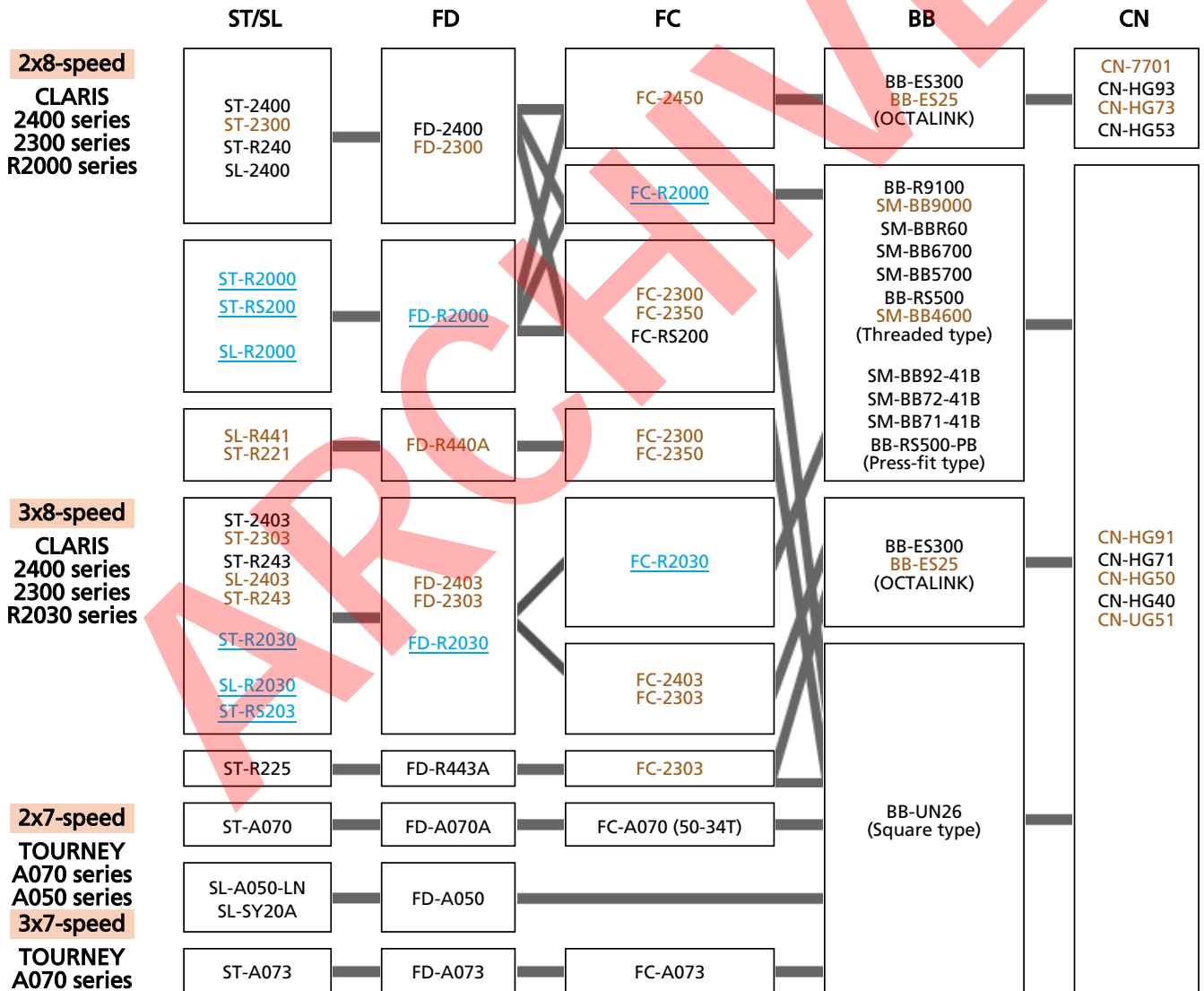
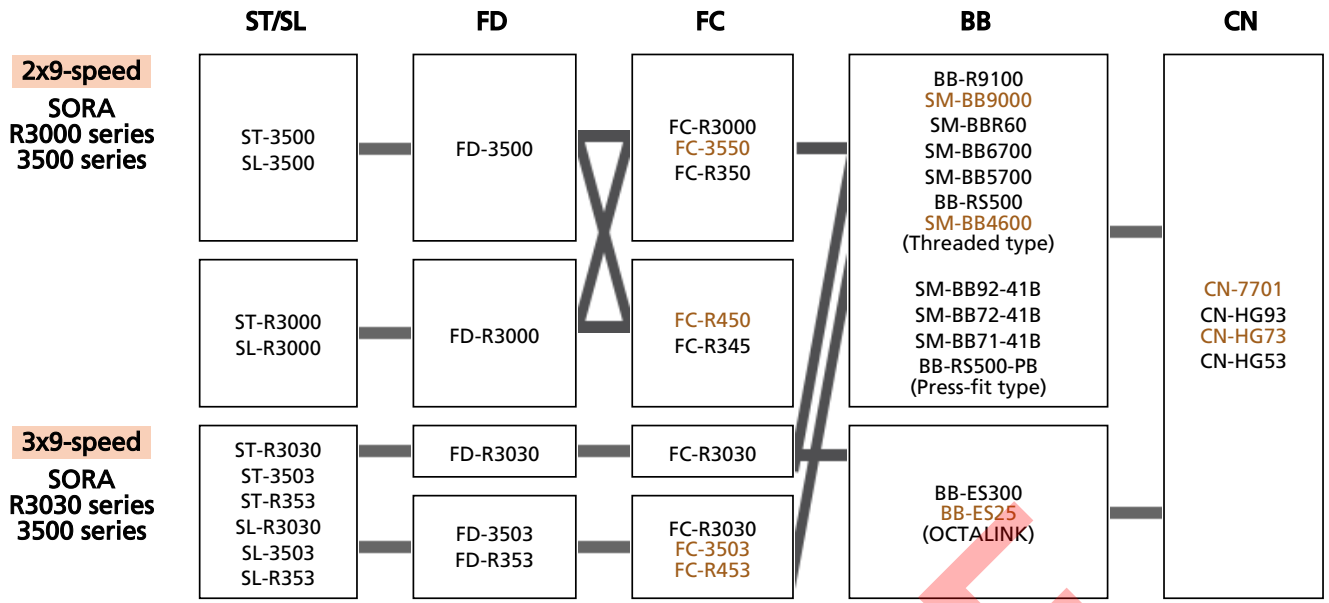
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# Front drivetrain compatibility [ROAD, URBAN SPORT]







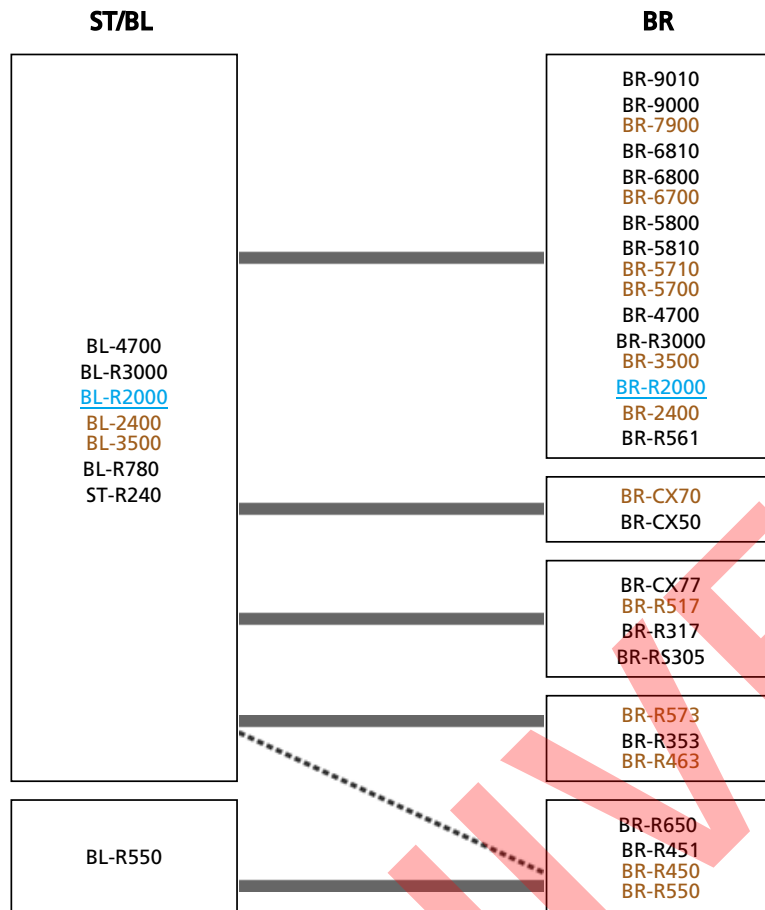


ST / BL		BR
ST-R9100		BR-R9100
ST-R9150		BR-R9110
ST-R9160		BR-9000
ST-9070		BR-9010
ST-9071		BR-7900
ST-9001		BR-R8000
ST-9000		BR-R8010
ST-R8000		BR-6800
ST-R8050		BR-6810
ST-R8060		BR-6700
ST-6870		BR-5800
ST-6871		BR-5810
ST-6800		BR-5710
ST-6770		BR-5700
ST-6700		BR-4700
ST-5800		BR-4600
ST-5700		BR-R3000
ST-4700		BR-3500
ST-4600		BR-R561
ST-R3000		BR-R2000
ST-3500	BR-CX70	
ST-R2000	BR-CX50	
ST-2400	BR-CX77	
ST-R460	BR-R517	
ST-R353	BR-R317	
ST-R350	BR-R5305	
BL-TT79	BR-R353	
	BR-R463	
ST-A070	BR-R650	
ST-A073	BR-R451	
	BR-R450	
	BR-R550	

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



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



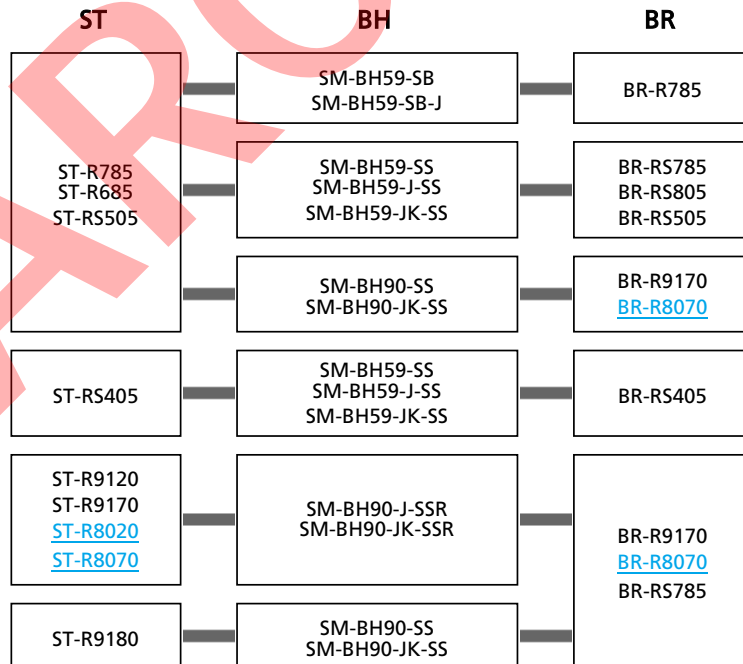
.....: Braking power is slightly less than standard combination.



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

## Hydraulic systems compatibility [ROAD]

C-499





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## Compatibility of I-SPEC shifter and brake lever

C-157

Clamp band type shifter can be compatible as I-SPEC when you change upper body with integration unit.

	Model No.	I-SPEC II shifter					I-SPEC B shifter		
		SL-M9000-I	SL-M8000-I	SL-M7000-11-I / SL-M7000-10-I	SL-U5000	SL-M6000-I	SL-M8000-B-I	SL-M7000-11 / SL-M7000-10-B-I	SL-M820-B-I, SL-M820 (with SM-SL82-B)
I-SPEC II	BL-M9000	X	X	X	X	X	-	-	-
	BL-M9020	X	X	X	X	X	-	-	-
	BL-M8000	X	X	X	X	X	-	-	-
	BL-T8000	X	X	X	X	X	-	-	-
	BL-M7000	X	X	X	X	X	-	-	-
	BL-M6000	X	X	X	X	X	-	-	-
	BL-T6000	X	X	X	X	X	-	-	-
	BL-RS600	X	X	X	X	X	-	-	-
	BL-MT500	X	X	X	X	X	-	-	-
BL-U5000	X	X	X	X	X	-	-	-	
I-SPEC B	BL-M987	-	-	-	-	-	X	X	X
	BL-M988-B	-	-	-	-	-	X	X	X
	BL-M820-B	-	-	-	-	-	X	X	X
	BL-M640-B	-	-	-	-	-	X	X	X
	BL-T780-B	-	-	-	-	-	X	X	X
	BL-T675-B	-	-	-	-	-	X	X	X
	BL-T670-B	-	-	-	-	-	X	X	X
	BL-T610	-	-	-	-	-	X	X	X
	BL-M506	-	-	-	-	-	X	X	X
BL-S700-B	-	-	-	-	-	X	X	X	

## Disc brake caliper and Rotor compatibility

C-461

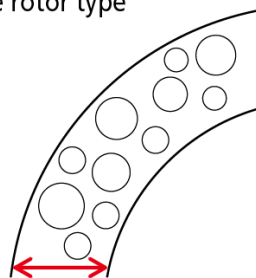
Caliper	Pad material	Type	Rotor size			
			203 mm (L)	180 mm (M)	160 mm (S)	140 mm (SS)
BR-M9000 BR-M9020 BR-M8000 <a href="#">BR-M8020</a> BR-M7000 <a href="#">BR-M6000</a>	Metal / Resin	Narrow	SM-RT99-L SM-RT86-L SM-RT81-L RT-EM900-L* SM-RT76-L SM-RT70-L SM-RT66-L SM-RT64-L	SM-RT99-M SM-RT86-M SM-RT81-M RT-EM900-M* RT-EM800-M* SM-RT76-M SM-RT70-M SM-RT66-M SM-RT64-M	SM-RT99-S SM-RT86-S SM-RT81-S RT-EM900-S* RT-EM800-S* SM-RT76-S SM-RT70-S SM-RT66-S SM-RT64-S	SM-RT99-SS SM-RT99-A-SS SM-RT81-SS
BR-M820 BR-M640	Metal / Resin					
BR-S700	Resin					
BR-T675 <a href="#">BR-T615</a> BR-M4050 <a href="#">BR-MT500</a> BR-M446 BR-M3050 BR-M395 BR-M375 BR-M365 BR-M315 BR-TX805	Resin	Wide	-	SM-RT56-M SM-RT54-M SM-RT30-M SM-RT26-M SM-RT10-M	SM-RT56-S SM-RT54-S SM-RT30-S SM-RT26-S SM-RT10-S	-
BR-R9170 <a href="#">BR-R8070</a> BR-RS805 BR-R785 BR-RS785 BR-RS505 BR-RS405	Metal / Resin	Narrow	-	-	SM-RT900-S <a href="#">SM-RT800-S</a> SM-RT99-S SM-RT86-S SM-RT81-S SM-RT70-S	SM-RT900-SS <a href="#">SM-RT800-SS</a> SM-RT99-SS SM-RT99-A-SS SM-RT81-SS
BR-CX77 <a href="#">BR-R517</a> BR-R317 BR-RS305	Metal / Resin	Narrow	-	-	SM-RT99-S SM-RT86-S SM-RT81-S SM-RT76-S SM-RT70-S SM-RT66-S SM-RT64-S	SM-RT99-SS SM-RT99-A-SS SM-RT81-SS
BR-U5000	Metal / Resin	Narrow	-	-	SM-RT99-S SM-RT86-S SM-RT81-S SM-RT76-S SM-RT70-S SM-RT66-S SM-RT64-S	SM-RT500-SS SM-RT99-SS SM-RT99-A-SS SM-RT81-SS

\* Disc brake rotor for speed sensor SM-DUE11, rear only.

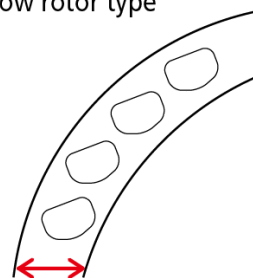
### NOTE

- SM-RT56 / SM-RT54 / SM-RT30 / SM-RT26 / SM-RT10 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-type pad become shorter when the pad is used with narrow type rotor.
- Narrow type 2 piece rotor are not compatible to caliper for Wide type rotor because of interference.

Wide rotor type



Narrow rotor type



## 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			
	203 mm (L)	180 mm (M)	160 mm (S)	140 mm (SS)
BR-T675 BR-T615 BR-M4050 BR-MT500 BR-M446 BR-M3050 BR-M395 BR-M365 BR-M315	SM-RT99 SM-RT86 SM-RT81 SM-RT76 SM-RT70	SM-RT99 SM-RT70	SM-RT900 SM-RT99 SM-RT86 SM-RT81 SM-RT76 SM-RT70	SM-RT900 SM-RT500 SM-RT99 SM-RT99-A SM-RT81

## Combination chart (Mechanical Disc)

C-462

### Mechanical Disc Brake combination chart C-463

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

Model No.	Mount type	Brake lever
BR-M375 BR-TX805	*	V-BRAKE BL (2 finger)
BR-R517	*	Road lever**
BR-R317	*	Road lever**
BR-CX77	*	Road lever**
BR-RS305	FLAT MOUNT	Road lever**

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

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

### Mechanical Disc brake and Brake lever compatibility C-464

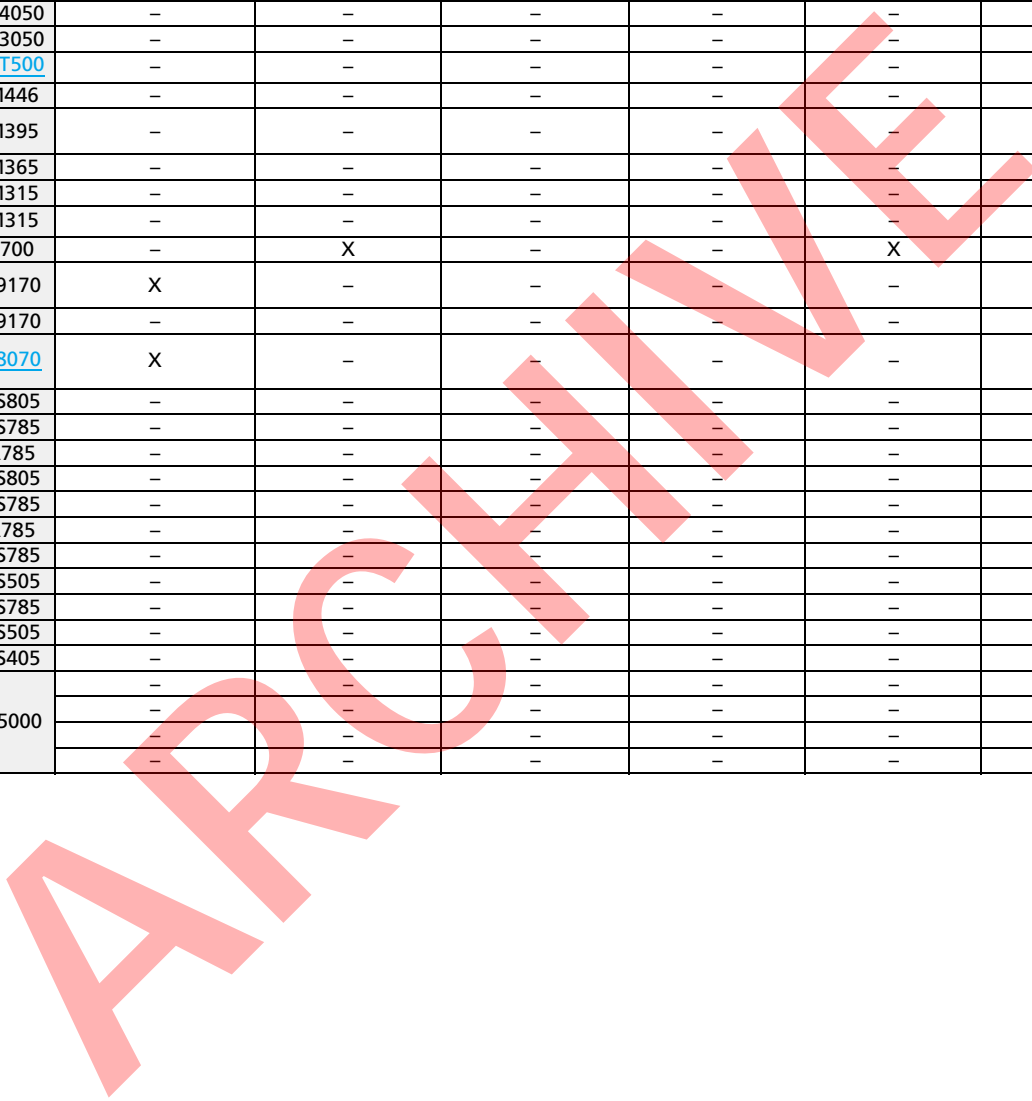
Model No.	Brake lever type		
	2 finger	3,4 finger	3,4 finger w / modulator* w / SM-PM50
BR-M375	X	-	X
BR-TX805	X	-	X

\* POWER MODULATOR must be used for front brake



# Compatibility between hydraulic disc brake hose

Connection		SM-BH90-JK-SSR	SM-BH90-SBM *4	SM-BH90-SBLS *1	SM-BH90-SBS *2	SM-BH90-SB *3	SM-BH90-SS
Rigidity		Straight - Straight	Straight - Banjo	Straight - Banjo	Straight - Banjo	Straight - Banjo	Straight - Straight
		High power	High power	High power	High power	High power	High power
BL-M9000	BR-M9000	-	X	-	-	-	-
BL-M9020	BR-M9020	-	X	-	-	X	-
BL-M820	BR-M820	-	-	X	-	-	-
BL-M8000	BR-M8000	-	X	-	-	X	-
BL-M8000	<a href="#">BR-M8020</a>	-	X	-	-	X	-
BL-T8000	BR-M8000	-	X	-	-	X	-
BL-M7000	BR-M7000	-	X	-	-	X	-
BL-T675	BR-T675	-	-	-	-	-	X
BL-M640	BR-M640	-	-	X	X	-	-
<a href="#">BL-M6000</a>	<a href="#">BR-M6000</a>	-	-	-	-	-	X
<a href="#">BL-T6000</a>	<a href="#">BR-M6000</a>	-	-	-	-	-	-
<a href="#">BL-RS600</a>	BR-RS405	-	-	-	-	-	-
ST-M4050	BR-M4050	-	-	-	-	-	-
ST-M3050	BR-M3050	-	-	-	-	-	-
<a href="#">BL-MT500</a>	<a href="#">BR-MT500</a>	-	-	-	-	-	-
BL-T445	BR-M446	-	-	-	-	-	-
BL-M425	BR-M395	-	-	-	-	-	-
BL-M396	BR-M395	-	-	-	-	-	-
BL-M365	BR-M365	-	-	-	-	-	-
BL-M315	BR-M315	-	-	-	-	-	-
<a href="#">ST-EF505</a>	BR-M315	-	-	-	-	-	-
BL-S700	BR-S700	-	X	-	-	X	-
ST-R9120	BR-R9170	X	-	-	-	-	-
ST-R9170	BR-R9170	-	-	-	-	-	-
ST-R9180	BR-R9170	-	-	-	-	-	-
<a href="#">ST-R8020</a>	<a href="#">BR-R8070</a>	X	-	-	-	-	-
<a href="#">ST-R8070</a>	<a href="#">BR-R8070</a>	-	-	-	-	-	-
ST-R785	BR-RS805	-	-	-	-	-	-
ST-R785	BR-RS785	-	-	-	-	-	-
ST-R785	BR-R785	-	-	-	-	-	-
ST-RS685	BR-RS805	-	-	-	-	-	-
ST-RS685	BR-RS785	-	-	-	-	-	-
ST-RS685	BR-R785	-	-	-	-	-	-
ST-RS505	BR-RS785	-	-	-	-	-	-
ST-RS505	BR-RS505	-	-	-	-	-	-
ST-RS405	BR-RS785	-	-	-	-	-	-
ST-RS405	BR-RS505	-	-	-	-	-	-
ST-RS405	BR-RS405	-	-	-	-	-	-
BL-U5000	BR-U5000	-	-	-	-	-	-
BL-U5010		-	-	-	-	-	-
ST-U5060		-	-	-	-	-	-
ST-U5080		-	-	-	-	-	-



		SM-BH90-JK-SS	SM-BH59-J-SS	SM-BH59-JK-SS (MTB)	SM-BH59-JK-SS (Road)	SM-BH59-SB*3	SM-BH59-SB-J*3
Connection		Straight - Straight	Straight - Straight	Straight - Straight	Straight - Straight	Straight - Banjo	Straight - Banjo
Rigidity		High power	Standard	Standard	Standard	Standard	Standard
BL-M9000	BR-M9000	-	-	-	-	-	-
BL-M9020	BR-M9020	-	-	-	-	-	-
BL-M820	BR-M820	-	-	-	-	-	-
BL-M8000	BR-M8000	-	-	-	-	-	-
BL-M8000	<a href="#">BR-M8020</a>	-	-	-	-	-	-
BL-T8000	BR-M8000	-	-	-	-	-	-
BL-M7000	BR-M7000	-	-	-	-	-	-
BL-T675	BR-T675	-	-	-	-	-	-
BL-M640	BR-M640	-	-	-	-	-	-
<a href="#">BL-M6000</a>	<a href="#">BR-M6000</a>	-	-	-	-	-	-
<a href="#">BL-T6000</a>	<a href="#">BR-M6000</a>	-	-	X	-	-	-
<a href="#">BL-RS600</a>	BR-RS405	-	-	X	-	-	-
ST-M4050	BR-M4050	-	-	X	-	-	-
ST-M3050	BR-M3050	-	-	X	-	-	-
<a href="#">BL-MT500</a>	<a href="#">BR-MT500</a>	-	-	X	-	-	-
BL-T445	BR-M446	-	-	X	-	-	-
BL-M425	BR-M395	-	-	X	-	-	-
BL-M396		-	-	-	-	-	-
BL-M365	BR-M365	-	-	X	-	-	-
BL-M315	BR-M315	-	-	X	-	-	-
<a href="#">ST-EF505</a>	BR-M315	-	-	X	-	-	-
BL-S700	BR-S700	-	-	-	-	-	-
ST-R9120	BR-R9170	-	-	-	-	-	-
ST-R9170		-	-	-	-	-	-
ST-R9180	BR-R9170	X	-	-	-	-	-
<a href="#">ST-R8020</a>	<a href="#">BR-R8070</a>	-	-	-	-	-	-
<a href="#">ST-R8070</a>		-	-	-	-	-	-
ST-R785	BR-RS805	-	X	-	-	-	-
ST-R785	BR-RS785	-	X	-	-	-	-
ST-R785	BR-R785	-	-	-	-	X	X
ST-RS685	BR-RS805	-	X	-	X	-	-
ST-RS685	BR-RS785	-	X	-	X	-	-
ST-RS685	BR-R785	-	-	-	-	X	X
ST-RS505	BR-RS785	-	X	-	X	-	-
ST-RS505	BR-RS505	-	X	-	X	-	-
ST-RS405	BR-RS785	-	-	-	X	-	-
ST-RS405	BR-RS505	-	-	-	X	-	-
ST-RS405	BR-RS405	-	-	-	X	-	-
BL-U5000	BR-U5000	-	-	-	X	-	-
BL-U5010		-	-	-	X	-	-
ST-U5060		-	-	-	X	-	-
ST-U5080		-	-	-	X	-	-

Level of compatibility

X: Compatible

\*: Refer Service Instruction of SM-BH80, SM-BH59 (brake hose 10 m coil) for assembling / disassembling banjo unit

-: Impossible to use

\*1: Banjo (long), Banjo bolt (short)

\*2: Banjo (normal), Banjo bolt (short)

\*3: Banjo (normal), Banjo bolt (normal)

\*4: Banjo (special), Banjo bolt (special)

## How to read Model No. C-194

(1) (2) (3) (4) (5) (6)  
**SM-MA-F203S/P**

(1)	Small parts
(2)	Mount adapter
(3)	F = Front and Rear * R = Rear
(4)	Rotor size **
(5)	Caliper mount type S = International A-standard P = Post D = Flat mount
(6)	Suspension / Frame type S = International A-standard P = Post D = Flat mount

### NOTE

\* This part may be used in the rear.

In this case, the rotor size description is also different. Refer to the table below.

\*\* The rotor size description is 160 mm. Direct post mount/International A-standard forks and frames are supported. Refer to the table below for other mount types.

## Application table for adapter C-195

### For post mount brake caliper

Fork and frame mount type		Rotor size				
		140 mm (SS)	160 mm (S)	180 mm (M)	203 mm (L)	
Post mount	Front	140 mm direct	Direct mount	SM-MA90-F180P / P SM-MA-F180P / P2 (for R785)	-	-
		160 mm direct	-	Direct mount	SM-MA90-F180P / P SM-MA-F180P / P2	SM-MA-F203P / P
		180 mm direct	-	-	Direct mount	SM-MA90-F203P / PM SM-MA-F203P / PM
		203 mm direct	-	-	-	Direct mount
	Rear	140 mm direct	Direct mount	SM-MA90-F180P / P SM-MA-F180P / P2	-	-
		160 mm direct	-	Direct mount	SM-MA90-F180P / P SM-MA-F180P / P2	SM-MA-F203P / P
		180 mm direct	-	-	Direct mount	SM-MA90-F203P / PM SM-MA-F203P / PM
		203 mm direct	-	-	-	Direct mount
International A-standard	Front	-	SM-MA90-F160P / S SM-MA-F160P / S	SM-MA-F180P / S	SM-MA-F203P / S	
	Rear	SM-MA90-R140P / S	SM-MA90-R160P / S SM-MA-R160P / S	SM-MA90-R180P / S SM-MA-R180P / S	SM-MA-R203P / S	
Flat mount	Front	SM-MA-F140P / D	SM-MA-F160P / D	-	-	
	Rear	SM-MA-R140P / D	SM-MA-R160P / D	-	-	

### For flat mount brake caliper





Fork and frame mount type		Rotor size	
		140 mm (SS)	160 mm (S)
Flat mount	Front	(with product / Y8N298010)	(with product / Y8N298010)
	Rear	Direct mount	SM-MA-R160D / D

## Compatibility between brake systems

C-466

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.

		V-BRAKE		Roller Brake
		BR-T780 BR-MX70 BR-R573 BR-R463 BR-R353 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-R573 with SM-PM70 BR-R463 with SM-PM40 BR-R353 with SM-PM70	BR-C6000 BR-C3010 BR-C3000
V-BRAKE Levers (2-finger)				
ST-M4000 ST-EF41 ST-TX800 ST-M370 ST-M310 ST-EF510 ST-EF500 ST-EF65 ST-EF51	BL-T610 BL-M571 BL-T4000 BL-MX70	X	X	NOTE
V-BRAKE Levers (3-finger)				
ST-T4000 ST-T3000	BL-T780 BL-T611 BL-T670 BL-T780-B BL-T4010 BL-T670-B		X	
Brake Levers with switch				
ST-R240	BL-4600 BL-R780 BL-4700 BL-R2000 BL-2400	X	X	
V-BRAKE lever with switch				
ST-M310 (4-finger) SB-C6000-8 SB-C3000-7 ST-EF65 (4-finger) ST-EF51 (4-finger) ST-EF510 (4-finger) ST-EF500 (4-finger)	BL-C6010 BL-C6000		X	X

X: Yes

\* POWER MODULATOR must be used for front brake



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

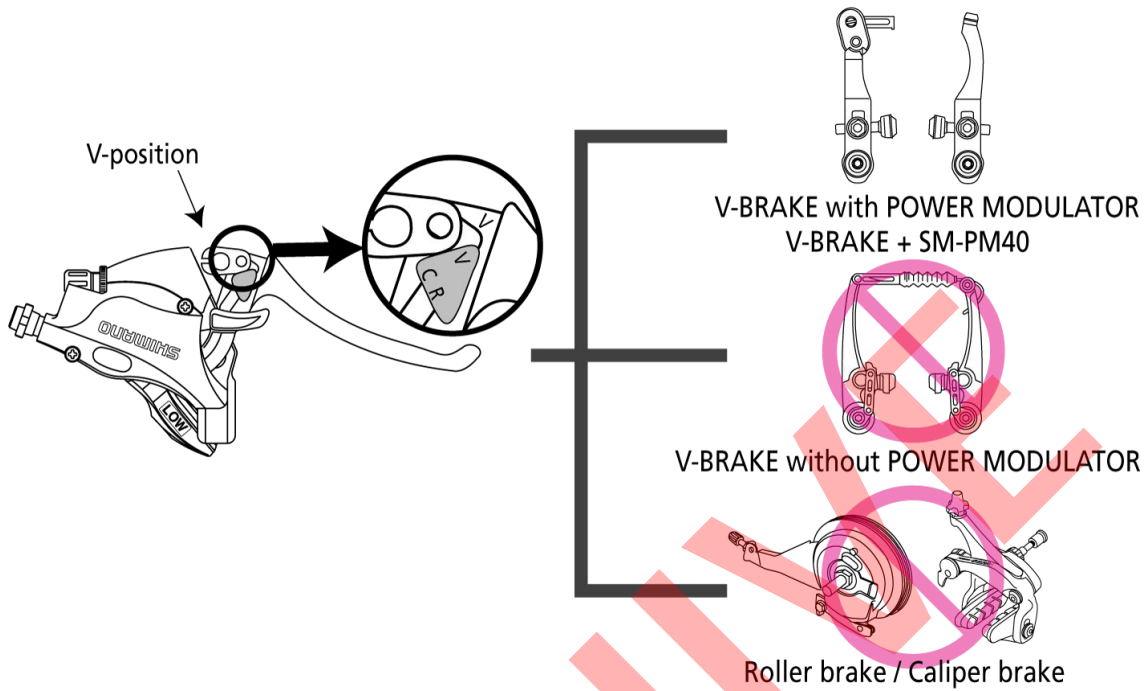
### NOTE

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

# Brake lever with switch compatibility

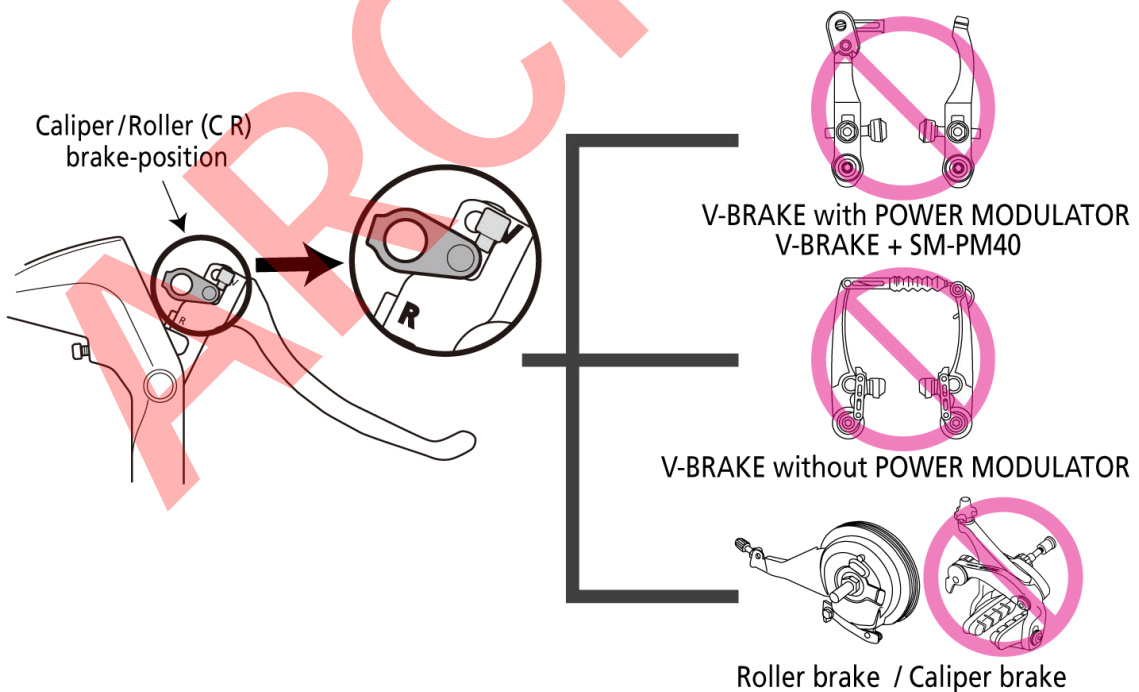
Four finger brake levers such as brake levers are equipped with a switch to change between the V-BRAKE with modulator mode (for example with SM-PM40) and the caliper brake or roller brake mode.

## For V-BRAKE (with POWER MODULATOR) mode C-468

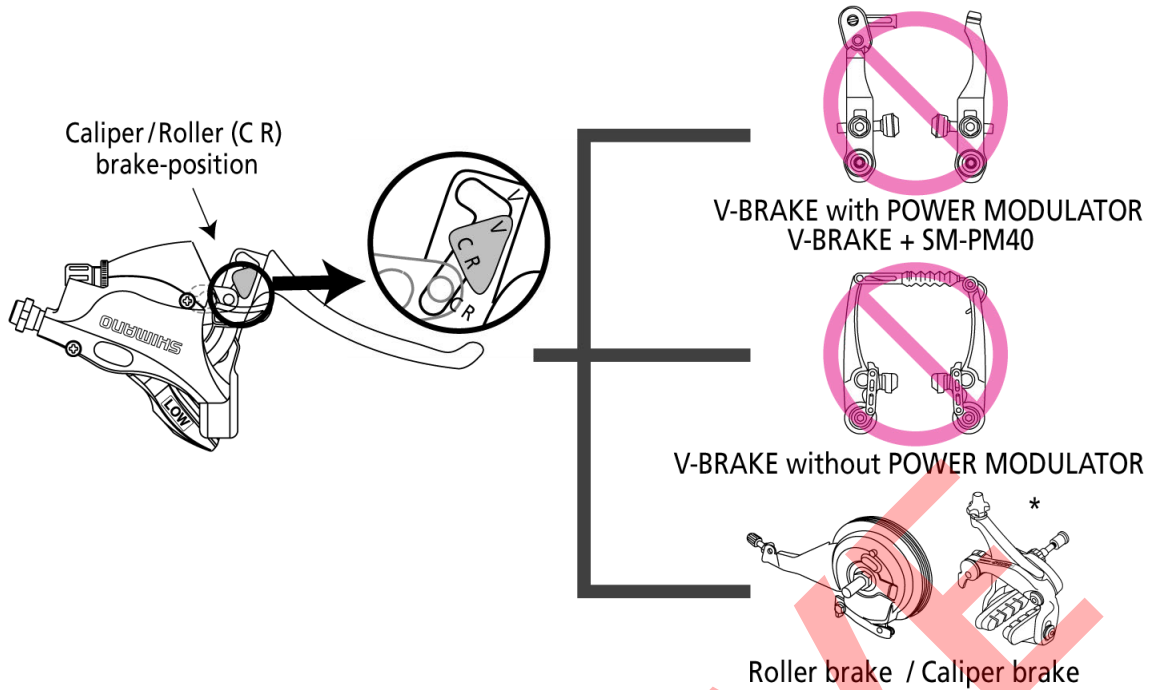


## For Caliper brake / Roller brake C-469

BL-C6010



## Other models



\* 3 types of caliper brake is available (SLR EV / NEW SUPER SLR / SUPER SLR)  
Please refer spec hand book for caliper brake compatibility.  
Some models can't be used with roller brake, please refer to [C-466](#) for more information.

### WARNING

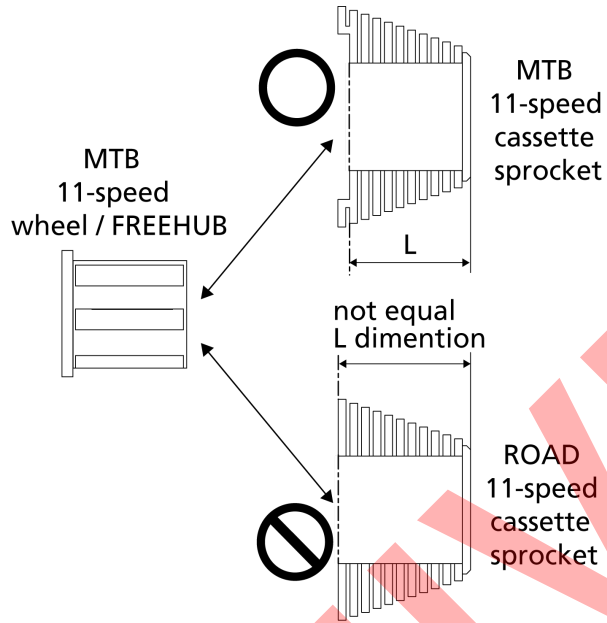
If the mode is not matched to the type of brake being used, this could result in inadequate or excessive braking power. Please proceed with caution when selecting the correct mode for the corresponding brake.

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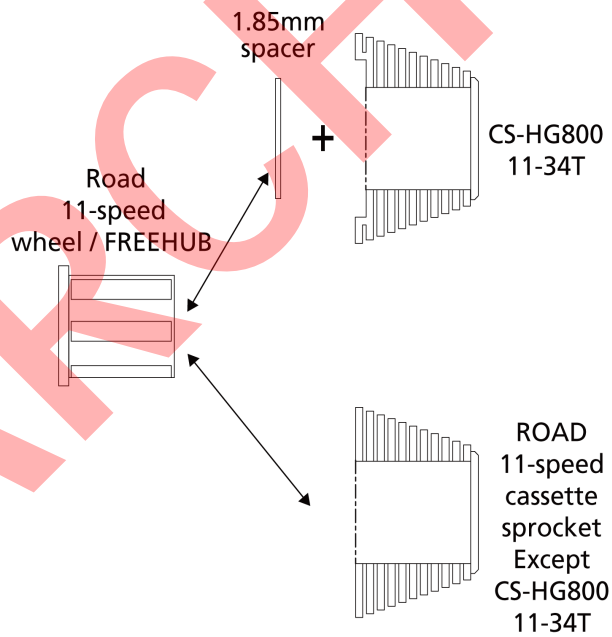
## 11-speed FREEHUB dimension

C-253

MTB 11speed wheel and FREEHUB have same serration with 10, 9-speed FREEHUB.



CS-HG800



# Compatibility between rear derailleur and cassette sprocket gear teeth [ROAD, URBAN SPORT]

C-254

## 11-speed C-255

Gear	11-speed								
	RD-R9150 / RD-R9100	RD-9000	RD-R8050 / RD-R8000		RD-6870		RD-6800 / RD-5800		RD-U5000-SS
	-	SS	SS	GS Front double	SS	GS Front double	SS	GS Front double	SS
11-23T	-	X	-	-	X	-	X	-	-
11-25T	X	X	X	-	X	-	X	-	-
11-28T	X	X	X	X	X	X	X	X	X
11-30T	X	-	X	X	-	X	-	X	-
11-32T	-	-	-	X	-	X	-	X	X
11-34T	-	-	-	X	-	-	-	-	-
12-25T	X	X	X	-	X	-	X	-	-
12-28T	X	X	X	X	X	X	X	X	-
14-28T	X	X	X	-	X	-	X	-	-

## 10-speed C-256

Gear	10-speed					
	RD-4700			RD-4601		
	SS	GS Front double	GS Front triple	SS	GS Front double	GS Front triple
11-25T	X	-	X	X	-	X
11-27T	X	-	X	X	X	X
11-28T	-	X	X	X	X	X
11-32T	-	X	X	-	X	-
11-34T	-	X	-	-	-	-
12-25T	X	-	X	X	-	X
12-27T	X	-	X	X	X	X
12-28T	X	X	X	X	X	X
12-30T	-	X	X	X	X	X
13-25T	X	-	-	X	-	X
14-25T	X	-	-	X	-	X

## 9-speed C-257

Gear	9-speed		
	RD-R3000		
	SS	GS Front double	GS Front Triple
11-25T	X	-	-
11-28T	X	X	X
11-30T	X	X	X
11-32T	X	X	X
11-34T	-	X	-
12-25T	X	-	-
12-27T	X	-	-
13-25T	X	-	-
14-25T	X	-	-

## 8-speed C-258

Gear	8-speed		
	RD-R2000		
	SS	GS Front double	GS Front Triple
11-28T	X	X	X
11-30T	X	X	X
11-32T	X	X	X
11-34T	-	X	-
12-25T	X	-	X
13-26T	X	-	-



## 7-speed C-259

Gear	7-speed
	RD-A070
	SMART CAGE
11-28T	X
12-28T	X
13-28T	X
14-28T	X

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

C-471

Dropout design	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 )	
Compatibility	NR: Not recommend		
FC	E	E: FC-NX75	
	F	FC-S501 : Double guard spec	
	G	FC-S501 : Single guard spec	
CN	H	H: CN-NX10(1/2 x 1/8 inch) or HG 85(1/2 x 3/32 inch)	
	I	Super Narrow HG 95	
	J	HG 85(1/2 x 3/32 inch)	

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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	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	
			D	OK	CT-S510	SM-GEAR	G	J	
NEXUS	8S / 7S / 3S (except 3D)	HRB / V-BR	A	OK	-	SM-GEAR	E	H	*2
			B	OK	-	SM-GEAR	E	H	
			C	OK	-	SM-GEAR	E	H	
			D	NR	CT-S500	CS-S500	F	I	
		Coaster	A	OK	-	SM-GEAR	G	J	
			B	OK	-	SM-GEAR	E	H	
			C	OK	-	SM-GEAR	E	H	
			D	NR	CT-S500	-	-	-	
				D	NR	CT-S510	-	-	*4
	3D	Disc use	A	NR	-	-	-	-	*1
			B	NR	-	-	-	-	
			C	OK	-	SM-GEAR	G	J	
			D	OK	CT-S500	CS-S500	F	I	
		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		
			D	OK	CT-S510	SM-GEAR	G	J	

\*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.

## Spoke protector

C-491

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.

Cassette sprocket		Spoke protector model													
		Flange diameter of rear hub(FH side)													
		53.8 mm							70.6 mm						
Speed	Model No.	Cassette sprocket low gear No.							Spoke hole No.			Spoke hole No.			
		28T	30T	32T	34T	36T	40T	42T	28H	32H	36H	28H	32H	36H	
11-speed	CS-M9001	-	-	-	-	-	X	-	-	-	-	-	-	-	
	CS-M8000	-	-	-	-	-	X	X	-	-	-	-	-	-	
	CS-M7000	-	-	-	-	-	X	X	-	-	-	-	-	-	
10-speed	CS-M771-10	-	-	-	X	X	-	-	-	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG81-10	-	-	-	X	X	-	-	-	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG500-10	-	-	-	-	-	-	X	-	-	-	-	-	-	
	CS-HG50-10	-	-	-	-	X	-	-	-	CP-FH56	CP-FH53	-	-	-	
9-speed	CS-HG400-9 / CS-HG300-9 / CS-HG201-9 / CS-HG200-9	-	-	-	-	X	-	-	-	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG400-9 / CS-HG300-9 / CS-HG201-9 / CS-HG200-9	-	-	X	X	-	-	-	CP-WH12	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG400-9 / CS-HG300-9	X	-	-	-	-	-	-	-	CP-FH35	CP-FH50	-	CP-FH76	CP-FH76	
	CS-ROAD	X	-	-	-	-	-	-	CP-FH08	CP-FH35	CP-FH31	-	-	-	
8-speed	CS-HG60-81	-	-	-	X	-	-	-	CP-WH12	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG51-8	X	X	-	-	-	-	-	CP-FH40	CP-FH35	CP-FH50	-	-	-	
	CS-HG51-8	-	-	-	X	-	-	-	CP-WH12	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG41-8 CS-HG31-8	-	X	-	-	-	-	-	CP-FH40	CP-FH35	CP-FH50	-	-	-	
	CS-HG41-8 CS-HG31-8	-	-	X	X	-	-	-	CP-WH12	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG200-8	-	-	X	-	-	-	-	CP-WH12	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
7-speed	CS-HG41-7	X	-	-	-	-	-	-	CP-FH40	CP-FH35	CP-FH50	-	-	-	
	CS-HG200-7	-	-	X	-	-	-	-	-	CP-FH56	CP-FH53	-	CP-FH76	CP-FH76	
	CS-HG200-7	X	-	-	-	-	-	-	-	CP-FH35	CP-FH50	-	-	-	

		Cassette sprocket								Spoke protector model	
Speed	Model No.	Cassette sprocket low gear No.								WH-M9000 WH-M9020 WH-M8000 WH-M8020 WH-M8000-B WH-M8020-B	WH-MT66-29
		28T	30T	32T	34T	36T	40T	42T	46T		
11-speed	CS-M9001	-	-	-	-	-	X	-	-	CP-WH17-A	-
	CS-M8000	-	-	-	-	-	X	X	X	CP-WH17-A	-
	CS-M7000	-	-	-	-	-	X	X	X	CP-WH17-A	-
10-speed	CS-M771-10	-	-	-	X	X	-	-	-	-	CP-WH16
	CS-HG81-10	-	-	-	X	X	-	-	-	-	CP-WH16
	CS-HG500-10	-	-	-	-	-	-	X	-	-	-
9-speed	CS-HG400-9 / CS-HG300-9 / <a href="#">CS-HG201-9</a> / CS-HG200-9	-	-	X	X	X	-	-	-	-	CP-WH16
	CS-HG400-9 / CS-HG300-9	X	-	-	-	-	-	-	-	-	CP-WH16

		Cassette sprocket								Spoke protector model	
Speed	Model No.	Cassette sprocket low gear No.								WH-MT35 WH-MT35-275 WH-MT35-29 WH-MT15-A-275 WH-MT15-A-29	<a href="#">WH-MT500</a>
		28T	30T	32T	34T	36T	40T	42T	46T		
11-speed	CS-M9001	-	-	-	-	-	X	-	-	-	-
	CS-M8000	-	-	-	-	-	X	X	X	-	-
	CS-M7000	-	-	-	-	-	X	X	X	-	-
10-speed	CS-M771-10	-	-	-	X	X	-	-	-	CP-WH12	-
	CS-HG81-10	-	-	-	X	X	-	-	-	CP-WH12	-
	CS-HG500-10	-	-	-	-	-	-	X	-	CP-WH19	<a href="#">CP-WH21</a>
9-speed	CS-HG50-10	-	-	-	-	X	-	-	-	CP-WH12	-
	CS-HG400-9 / CS-HG300-9 / <a href="#">CS-HG201-9</a> / CS-HG200-9	-	-	X	X	X	-	-	-	CP-WH12	-
	CS-HG400-9 / CS-HG300-9	X	-	-	-	-	-	-	-	CP-WH08	-

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Model No.	Cassette Sprocket total gear No.			Cassette Sprocket low gear No.							
	9-speed	10-speed	11-speed**	23T	25T	27T	28T	30T	32T*	34T	
WH-R9170-C60 WH-R9170-C40	-	-	X	-	CP-W1460				-	-	
	-	X	-	-	CP-W1460				-	-	
WH-R9100-C60 WH-R9100-C40	-	-	X	-	CP-W124				-	-	
	-	X	-	-	CP-W124				-	-	
WH-R9100-C24	-	-	X	CP-WH23	CP-W120				-	-	
	-	X	-	CP-W020						-	-
<a href="#">WH-RS770-C30</a>	-	-	X	-	CP-W1460				-	-	
	-	X	-	-	CP-W1460				-	-	
<a href="#">WH-RS700-C30</a>	-	-	X	-	CP-W124				-	-	
	-	X	-	-	CP-W124				-	-	
<a href="#">WH-RS500</a> WH-RS11 WH-RS11	-	-	X	CP-WH23			-	CP-W120	-	-	
	-	X	-	CP-W020						-	-
WH-9000-C24-TU <a href="#">WH-RS700-C30</a> WH-RS330-CL	-	-	X	CP-W184			-	CP-W124	-	-	
	-	X	-	CP-W024						-	-
WH-RX830	-	X	X	-	CP-W1220				CP-WH14 CP-WH14A	-	
WH-RS010-CL	-	X	X	-	CP-WH24				CP-FH53	-	
WH-R501 WH-R501-A	X	X	-	CP-FH06	CP-FH31	CP-FH46	CP-WH24	-	-		
	-	-	X	CP-FH08			-	CP-WH12	-		
<a href="#">WH-RS170</a>	-	X	-	CP-FH40 CP-FH41	CP-FH41	CP-FH41	CP-WH12	CP-WH12	-		
	-	-	X	CP-FH08			-	CP-WH12	-		
WH-RX010-CL	-	X	-	CP-FH40 CP-FH41	CP-FH41	CP-FH41	CP-WH12	CP-WH12	-		
WH-RX010	X	X	-	CP-FH08	CP-FH40 CP-FH41	CP-FH41	CP-WH12	CP-WH12	-		
WH-U5000	-	X	X	-	CP-W122					-	

\* For compact crank set

\*\* 11-speed : CS-R9100 / CS-6800 / CS-5800

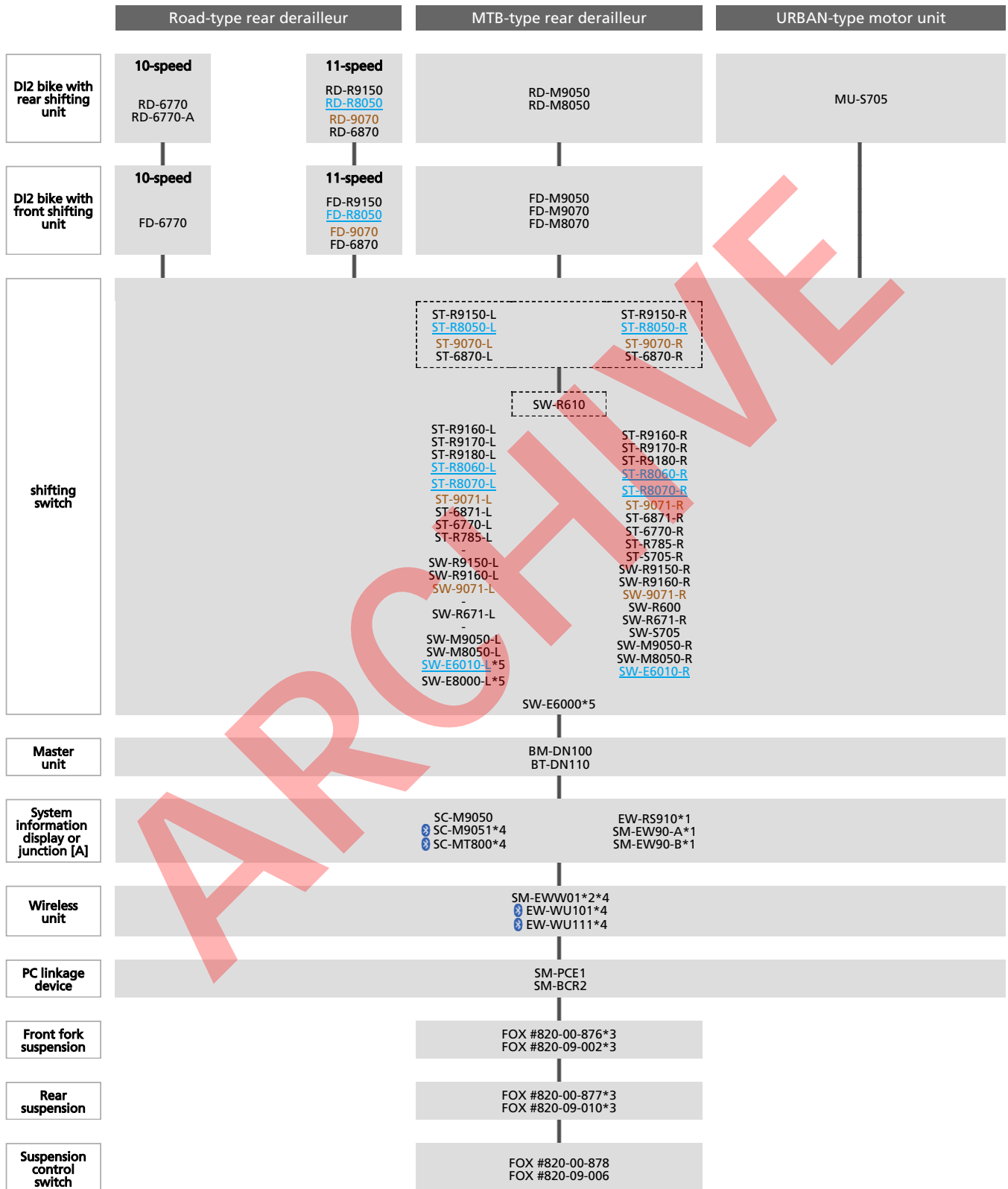
## Spoke protector for Road

Speed	Model No.	Cassette sprocket low gear No.									Spoke holes No.				
		21T	23T	24T	25T	26T	27T	28T	30T	32T	34T	24H	28H	32H	36H
8, 9, 10-speed	Road	X	X	-	X	-	-	-	-	-	-	CP-FH06	CP-FH08	CP-FH05	CP-FH06
		-	-	-	-	X	-	-	-	-	-	CP-FH31	CP-FH08	CP-FH35	CP-FH31
		-	-	-	-	-	X	X	-	-	-	CP-FH31	CP-FH08	CP-FH35	CP-FH31
		-	-	-	-	-	-	-	X	-	-	-	-	CP-FH45	CP-FH46
7-speed	CS-HG200-7	-	-	-	-	-	-	X	-	-	-	-	CP-FH35	CP-FH50	
	<a href="#">MF-TZ500-7</a> <a href="#">MF-TZ21</a>	-	-	-	-	-	-	X	-	-	-	-	-	CP-HG22/ <a href="#">MF-TZ500-7-CP</a> / <a href="#">MF-TZ21-CP</a>	

Spoke protector is not available for Road 11-speed FREEHUB.

## E-TUBE compatibility chart with E-TUBE PROJECT ver.3.3

### DI2 with BM-DN100 / BT-DN110



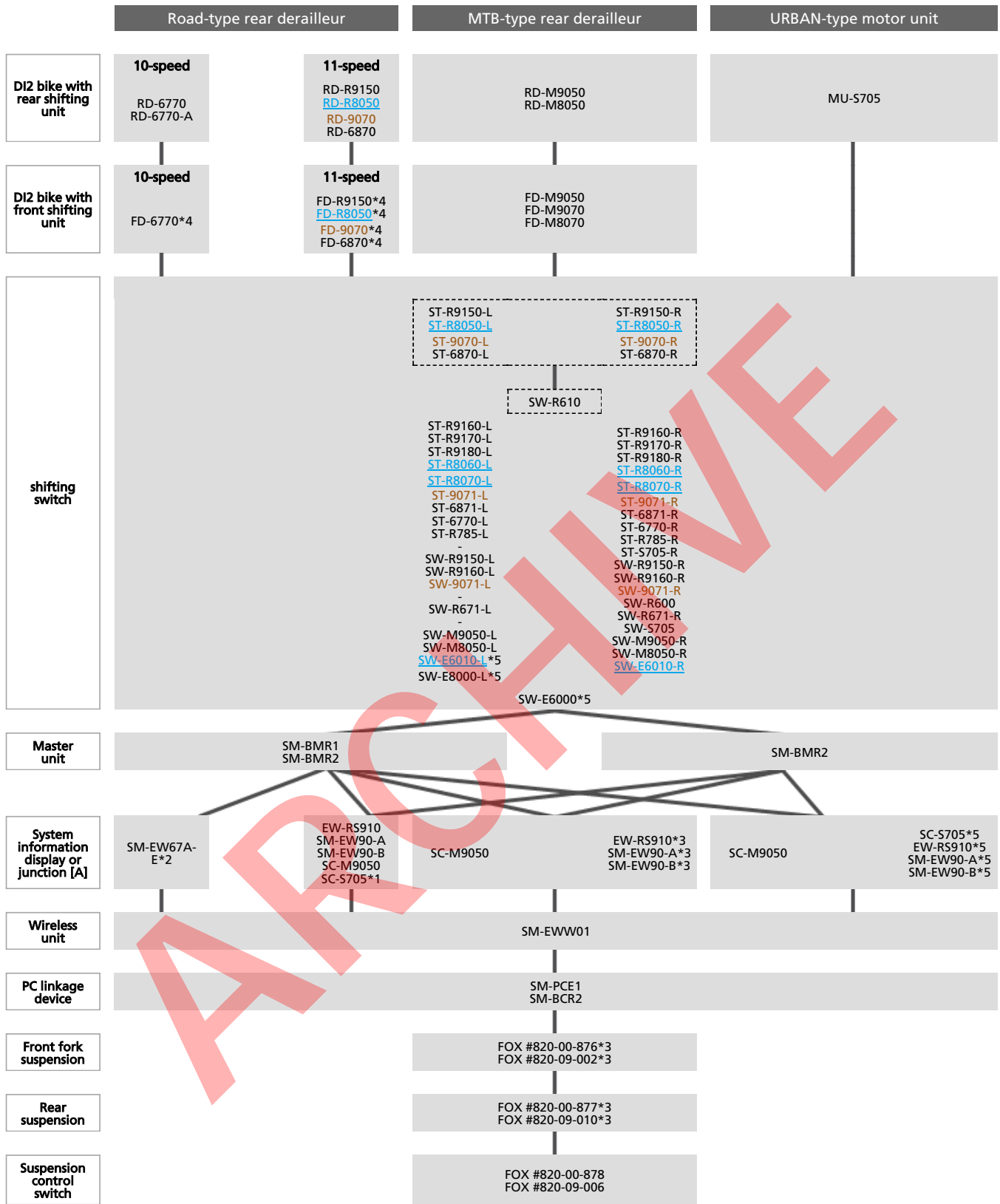
**Limitation of function with BM-DN100 / BT-DN110**

- \*1 Shifting adjustment mode for MU-S705 is not supported (need E-TUBE PROJECT to adjust).
- \*2 Not possible to connect to E-TUBE PROJECT for tablet/smartphone, as no support for Bluetooth®LE.
- \*3 A designated control switch and/or the combination SW-M9050/M8050-L with SC-M9050/SC-M9051/SC-MT800 is required to operate.
- \*4 The system accepts just 1 unit with wireless chip (doesn't work if plural units with wireless chip are connected).
- \*5 Need to change Switch setting by E-TUBE PROJECT.
- \*6 SC-M9050, SC-M9051 or SC-MT800 is required for SYNCHRONIZED SHIFT in MTB category.

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# DI2 with SM-BMR1 / SM-BMR2 / SM-BTR2



**Limitation of function with SM-BMR1 / SM-BMR2 / SM-BTR2**

\*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 in case with MTB-type Rear Derailleur.

\*4 SYNCHRONIZED SHIFT is not available with Road-type Rear Derailleur.

\*5 Shifting adjustment mode for MU-S705 is not supported (need E-TUBE PROJECT to adjust).

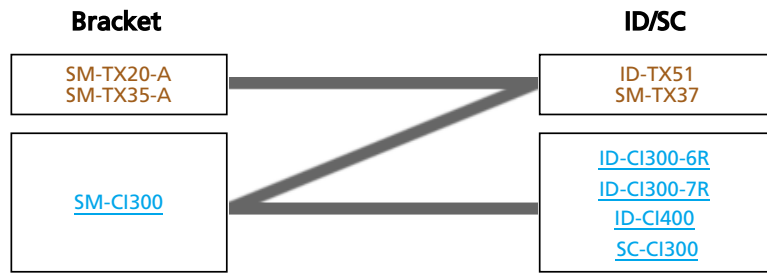
\*6 Need to change Switch setting by E-TUBE PROJECT.

\*7 A designated control switch is needed to operate the suspension system.

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## Compatibility between Bracket and ID/SC

C-548



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