



2015-2016

Products compatibility information

Compatibilities are subject to change without prior

Word definitions

BB	Bottom bracket	GM	Grommet
BC	Brake cable	HB	Front hub
BCC	Battery cable	HP	Head parts
BCR	Battery charger	HRB	Hub roller brake
BH	Disc brake hose	I-spec	Integration mounting system of brake and shift lever
BL	Brake lever	ID	CI-DECK
BM	Battery mount	JC	Junction
BR	Brake caliper	LP	Light
BTC	Battery case	MF	Multiple freewheel
BTH	Battery holder	MU	Motor unit
BTR	Battery	O.L.D.	Over locknut dimension
CB	Coaster brake	P.C.D.	Pich circle diameter
CG	Chain guard	PD	Pedal
CJ	Cassette joint	PM	Power modulator
CN	Chain	QR	Quick release
CP	Spoke protector	RD	Rear derailleur
CR	Chainring	RT	Disc brake rotor
CS	Cassette sprocket	RTAD	Disc brake rotor adapter
CT	Chain tensioner	SB	Revo shifter integrated with brake lever
DH	Hub dynamo	SC	Cycle computer
DU	Drive unit	SF	Single free
EC	Battery charger	SG	Internal geared hub
EW	Electric wire	SL	Shift lever
EWC	Cord cover	SPD	Shimano pedaling dynamics
EWEX	Di2 adapter	SPD-SL	Shimano pedaling dynamics-SL
EWV	Wireless unit	ST	Dual control lever / Shift lever integrated with brake lever
FC	Crankset	SW	Switch
FD	Front derailleur	WH	Wheel
FH	Freehub		

Compatibility

Drivetrain for MTB components C-432

Rear drivetrain compatibility [MTB] C-433 C-434 C-435 C-436 C-437 C-438 C-439

Front drivetrain compatibility [MTB] C-440 C-441 C-442 C-443 C-444 C-445 C-446

Front derailleur and crankset C-447

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Compatibility between brake systems C-466

Brake lever with switch compatibility C-467 C-468 C-469

Comfort components C-470

Combinations of the rear gear, cassette sprocket, and crankset for designing the frame C-471

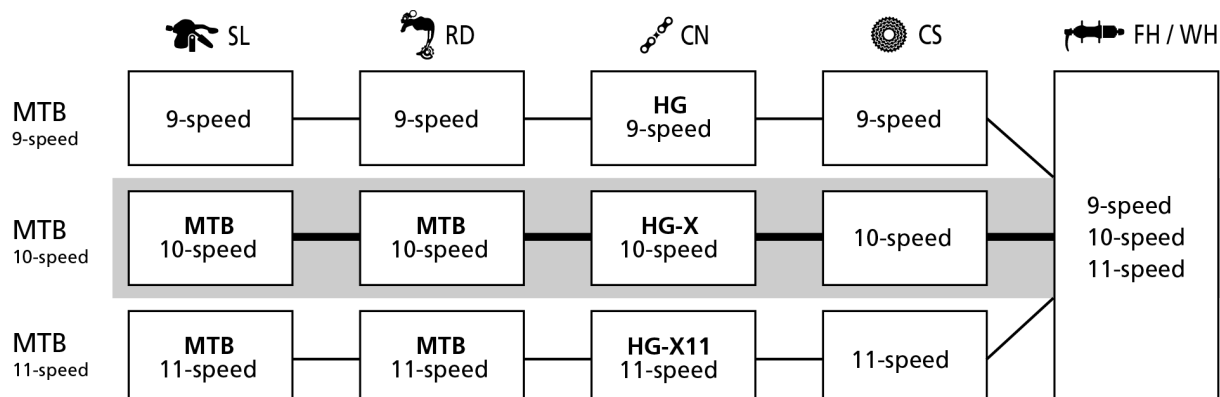
Electronic Product Information C-472

E-TUBE compatibility chart C-473

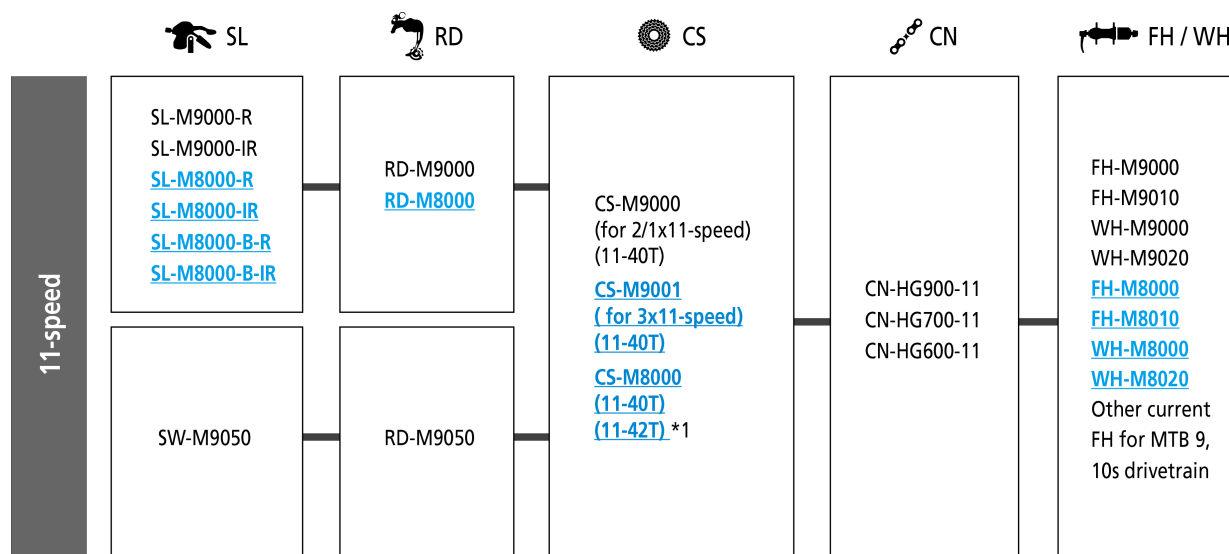
Rear drivetrain compatibility [MTB]

C-433

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

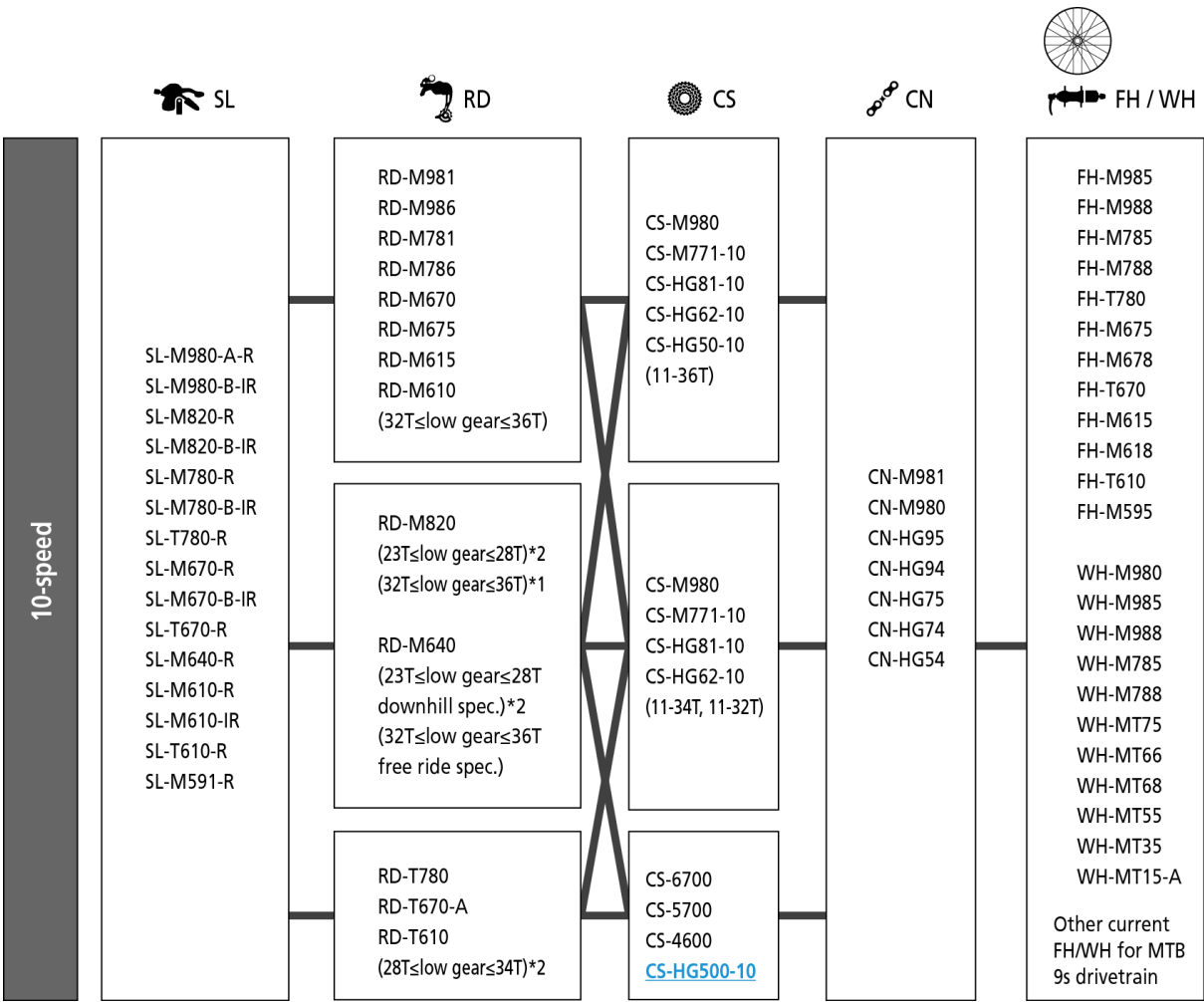


11-speed rear drivetrain [MTB] C-435



*1 11-42T is compatible with only 1x11 drive train.

10-speed rear drivetrain [MTB] C-436



*1 Mode converter
*2 Compatible with road Cassette sprocket

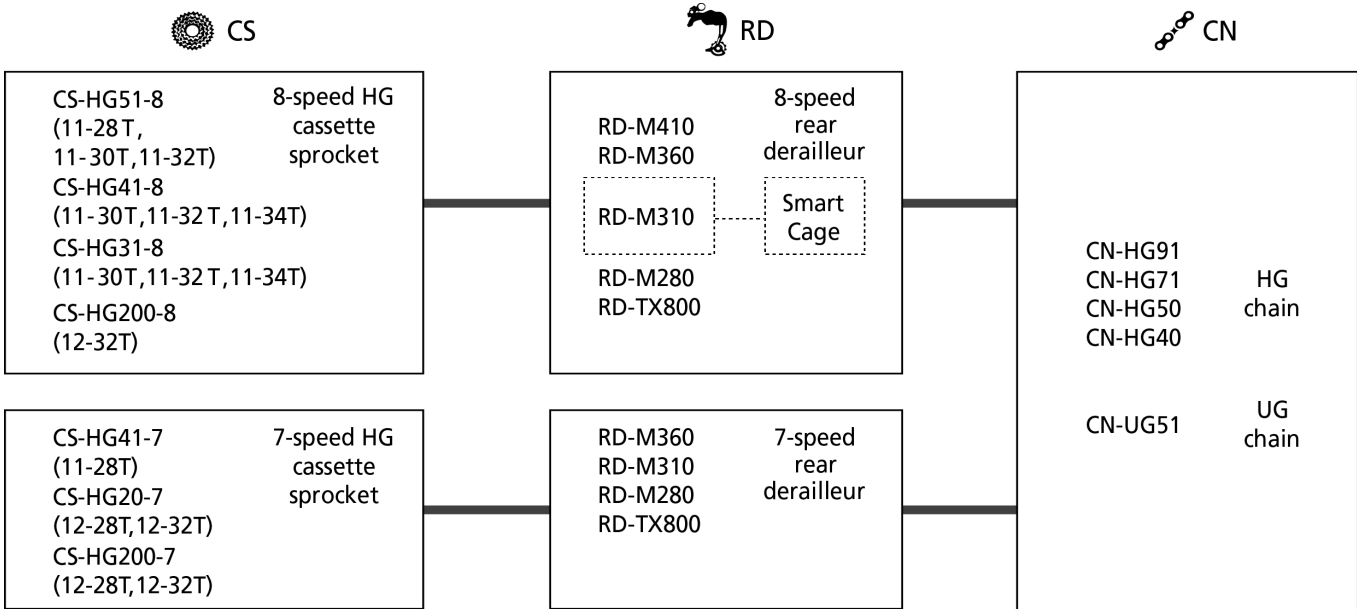
9-speed rear drivetrain [MTB] C-437

Cassette Sprocket			Shadow RD	W-servo RD	CN
			RD-M772 RD-M662 RD-M592 RD-M4000 RD-M3000	RD-T4000 RD-M430 RD-T3000 RD-M390 RD-M370	CN-7701 CN-HG93 CN-HG73 CN-HG53
CS-HG61-9	bh	12-36T	X	-	X
CS-HG400-9	bh				
CS-HG300-9	bh				
CS-HG80-9	au	11-34T	X	X	X
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	11-32T	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	11-28T	-	X	X
CS-HG20-9	bo				
CS-HG80-9	bg				
CS-HG61-9	bg				
CS-HG400-9	bg				
CS-HG300-9	bg				

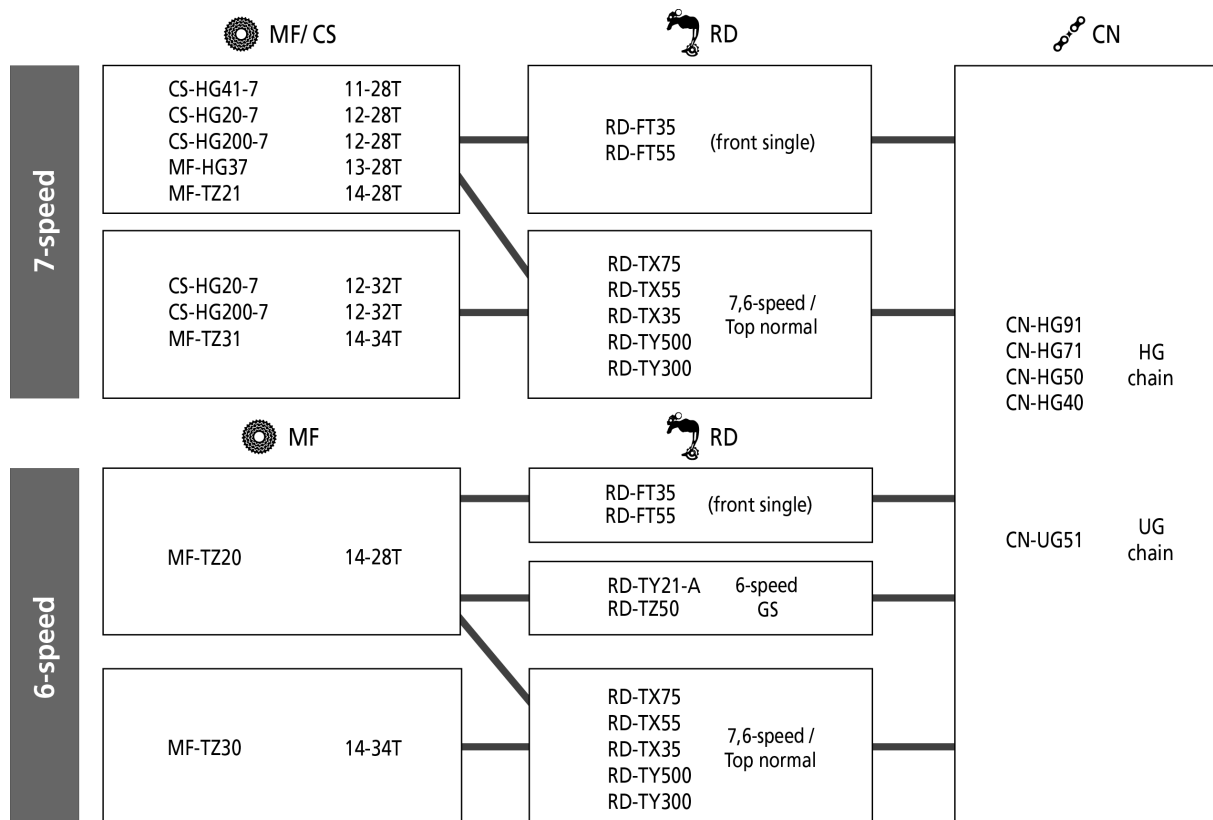
X: Yes

8,7-speed HG [MTB] C-438

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

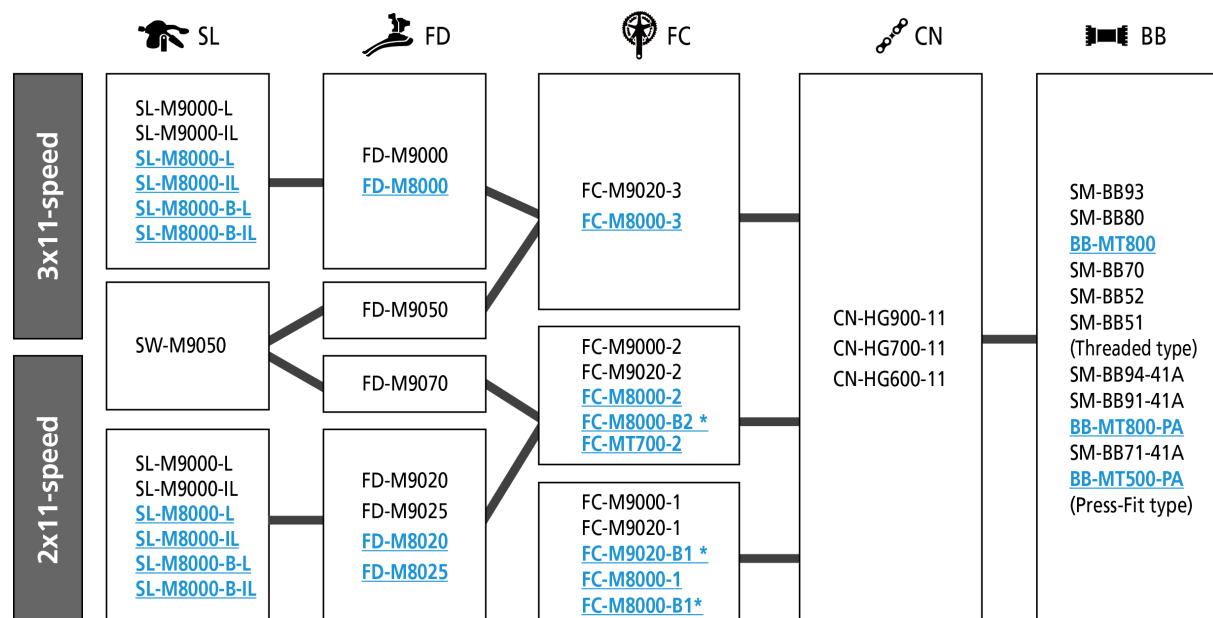


7-speed HG and 6-speed [MTB] C-439

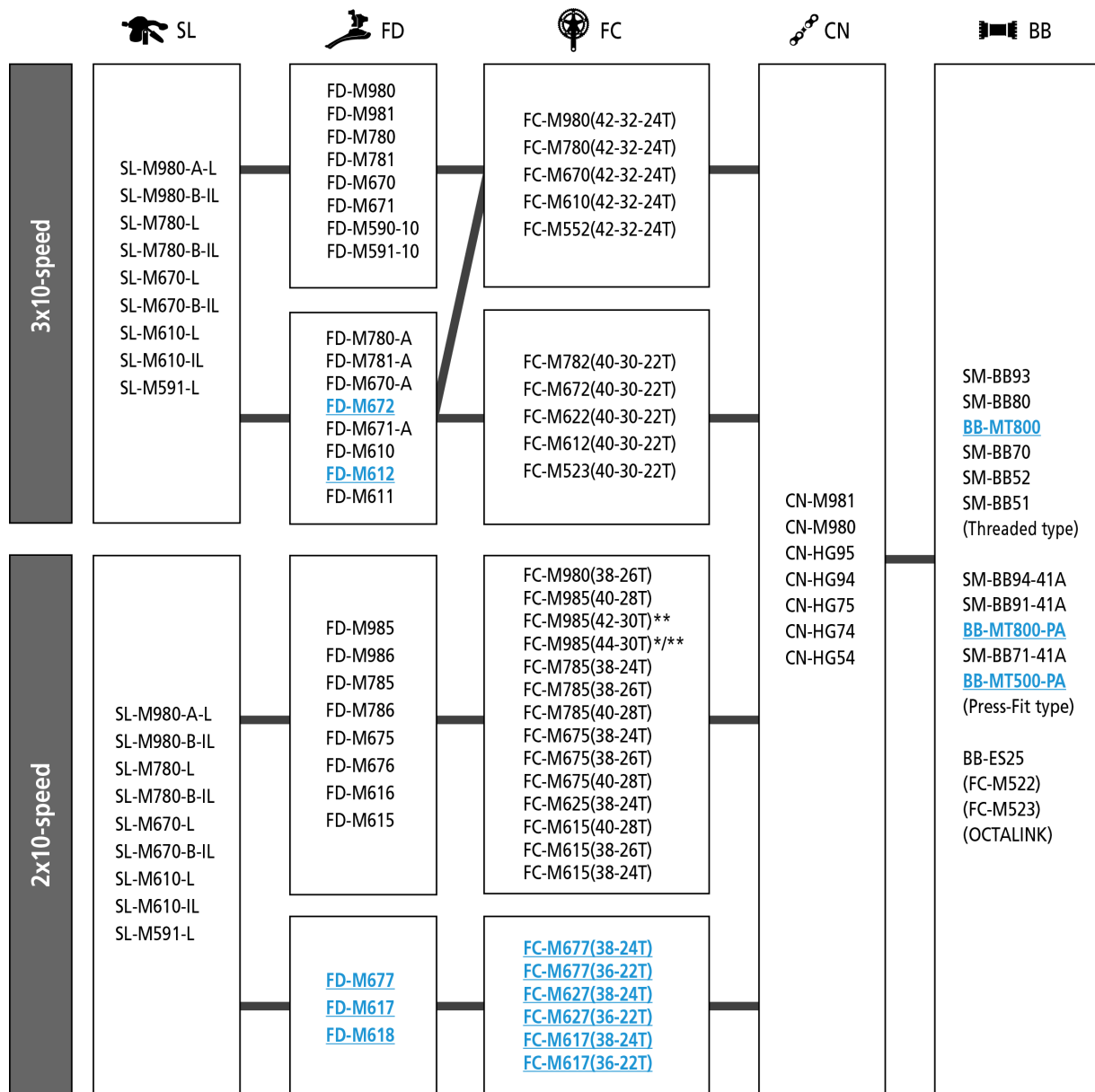


Front drivetrain compatibility [MTB] C-440

11-speed front drivetrain C-441

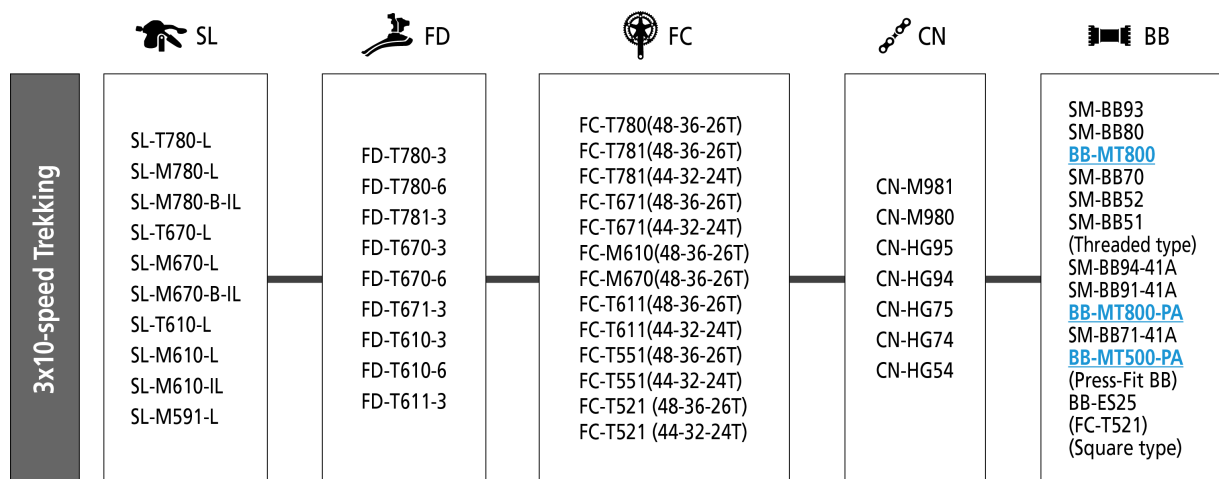


10-speed front drivetrain [MTB] C-442



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

***: Not compatible with E2 type front derailleur.



11-speed FC-FD compatibility [MTB] **C-443**

		Speed		11-speed	
		Chain line		50	48.8
		Chainstay angle		66-69°	
Chain line (mm)	FC Model No.	Gear combination	For triple	For double	
			FD-M9000 FD-M9050 FD-M8000	FD-M9020 FD-M9025 FD-M9070 FD-M8020 FD-M8025	
48.8	FC-M9000-2 FC-M9020-2 FC-M8000-2	38-28T	-	X	
		36-26T	-	X	
		34-24T	-	X	
	FC-MT700-2	36-26T	-	X	
50	FC-M9020-3 FC-M8000-3	40-30-22T	X	-	

11-speed FC-FD compatibility B type

		Speed	11-speed
		Chain line	48.8
		Chainstay angle	66-69°
Chain line (mm)	FC Model No.	Gear combination	For double
			FD-M9020 FD-M9025 FD-M9070 FD-M8020 FD-M8025
51.8	FC-M8000-B2	36-26T	X

10-speed FC-FD compatibility [MTB] **C-444**

Model No.	Top swing / Side swing (L, E-type)						
	For triple						
	Chainstay angle	66° - 69°					63° - 66°
	Gear combination	FD-M980	FD-M780-A FD-M670-A FD-M610	FD-M980-E	FD-M780-A-E FD-M672-L FD-M672-E FD-M670-A-E FD-M612-L FD-M612-E FD-M610-E	FD-T780-6 FD-T670-6 FD-T610-6	FD-T780-3 FD-T670-3 FD-T610-3
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	48-36-26T	-	-	-	-		X
FC-T551 FC-T521	44-32-24T	-	-	-	-		X

Model No.	Top swing / Side swing (L, E-type)				
	For double				
	Chainstay angle	66° - 69°			
	Gear combination	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)	FD-M677-L FD-M677-E FD-M617-L FD-M617-E FD-M618-L FD-M618-E
FC-M985	44-30T	X	X	-	-
	42-30T	X	X	-	-
	40-28T	X	X	X	-
FC-M980	38-26T	X	-	X	-
FC-M785	40-28T	X	X	X	-
FC-M675	38-26T	X	-	X	-
FC-M625	38-24T	X	-	X	-
FC-M677	38-24T	-	-	-	X
FC-M627 FC-M617	36-22T	-	-	-	X

Model No.	Down swing / Side swing (H, D-type)					
	For triple					
	Chainstay angle	66° - 69°				63° - 66°
	Gear combination	FD-M981	FD-M781-A FD-M671-A FD-M611	FD-M981-D	FD-M781-A-D FD-M672-H FD-M672-D FD-M671-A-D FD-M612-H FD-M612-D FD-M611-D	FD-T781-3 FD-T671-3 FD-T611-3
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-T522	48-36-26T	-	-	-	-	X
	44-32-24T	-	-	-	-	X

Model No.	Down swing / Side swing (H, D-type)			
	For double			
	Chainstay angle	66° - 69°		
	Gear combination	FD-M986 FD-M786 FD-M676 FD-M616	FD-M986-D FD-M786-D FD-M676-D FD-M616-D	FD-M677-H FD-M677-D FD-M617-H FD-M617-D FD-M618-H FD-M618-D
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	-
FC-M677 FC-M627 FC-M617	38-24T	-	-	X
	36-22T	-	-	X

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

X: Yes

B-type

Model No.		Top swing Side swing (E-type)	Down swing Side swing (D-type)
		For double	
	Chainstay angle	66° - 69°	
	Gear combination	FD-M677-E FD-M617-E FD-M618-E	FD-M677-D FD-M617-D FD-M618-D
FC-M627-B	36-22T	X	X

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

		Speed		9-speed			
		Chain line		50 mm			
		Chainstay angle		66° - 69°			
		Top swing FD		-	FD-M770-E	FD-M4000-TS6 FD-M3000-TS6	FD-M770 FD-M590-6 FD-T4000-TS6 FD-T3000-TS6 FD-M390-6 FD-M370-6
Chain line	BB Model No. / Structure	Down swing FD		FD-M771 FD-M771D FD-M661D	-	FD-M4000-DS6	FD-M591-6 FD-M371-6
50 mm	2pc type FC	FC-M4050	40-30-22T	-	-	X	-
		FC-M770	44-32-22T	X	X	-	X
		FC-M542					
		FC-M543K					
		FC-M590					
		FC-M591					
		FC-T4060					
		FC-M543K	48-36-26T	-	-	-	X
		FC-M590					
		FC-M591					
		FC-M4060					
		FC-T4060					
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	44-32-22T	X	X	-	X
	BB-ES25 126 (-K)	FC-T4010					
		FC-T3010-8					
	BB-UN26 LL123 (-K)	FC-M391-8					
		FC-M391					
		FC-T3010					
	BB-ES25 118 (-E)	FC-M371	40-30-22T	-	-	X	-
		FC-M351					
	BB-UN26 LL113 (-E)	FC-M4000 FC-M3000-8					
	BB-ES25 118 (-E)	FC-M3000					
	BB-UN26 LL113 (-E)	FC-M430-8					
	BB-UN26 LL113 (-E)	FC-M430	44-32-22T	X	X	-	X
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	48-36-26T	-	-	-	X
	BB-ES25 126 (-K)	FC-T4010					
		FC-T3010-8					
		FC-M391-8					
	BB-UN26 LL123 (-K)	FC-M391					
		FC-T3010					
		FC-M371					

		Speed		9-speed	
		Chain line		50 mm	
		Chainstay angle		63° - 66°	
		Top swing FD		FD-M4000-TS3 FD-M3000-TS3	FD-M772A FD-T660A-3 FD-M590-3 FD-T4000-TS3 FD-T3000-TS3 FD-M390-3 FD-M370-3
Chain line	BB Model No. / Structure	Down swing FD		FD-M4000-DS3	FD-M773 FD-T661-3 FD-M591-3 FD-T4000-DS3 FD-M371-3
50 mm	2pc type FC	FC-M4050	40-30-22T	X	-
		FC-M770	44-32-22T	-	X
		FC-M542			
		FC-M543K			
		FC-M590			
		FC-M591			
		FC-T4060	48-36-26T	-	X
		FC-M543K			
		FC-M590			
		FC-M591			
		FC-M4060			
		FC-T4060			
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	44-32-22T	-	X
	BB-ES25 126 (-K)	FC-T4010			
		FC-T3010-8			
		FC-M391-8			
	BB-UN26 LL123 (-K)	FC-M391			
		FC-T3010			
		FC-M371			
	BB-ES25 118 (-E)	FC-M4000	40-30-22T	X	-
		FC-M3000-8			
	BB-UN26 LL113 (-E)	FC-M3000	44-32-22T	-	X
	BB-ES25 118 (-E)	FC-M430-8			
	BB-UN26 LL113 (-E)	FC-M430			
	BB-ES25 (please refer chart as below for detailed combination)	FC-M521	48-36-26T	-	X
	BB-ES25 126 (-K)	FC-T4010			
		FC-T3010-8			
		FC-M391-8			
	BB-UN26 LL123 (-K)	FC-M391			
		FC-T3010			
		FC-M371			

X: Yes

FC-M521 / BB-ES25 combination

		MTB (without chain case) Trekking (with chain case) E-type	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

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

		Speed		8,7-speed					
		Chain line		50.0 mm		47.5 / 47.5+t mm / 50.0 mm		47.5 / 47.5+t mm / 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	FD-M360-3 FD-M310-3 FD-TX800-TS3	FD-M190A-6 <u>FD-TY700-TS6</u>	FD-M190-3 <u>FD-TY700-TS3</u>
Chain line	BB Model No. / Structure	Down swing FD		-	-	FD-M313-6	FD-M313-3	-	-
50 mm	BB-ES25 (-K) 126 (K)	FC-M361-8	42-32-22T	-	-	X	X	-	-
		FC-M311-8		-	-	-	-	-	-
	BB-UN26 (-K) LL123 (-K) <u>BB-UN100</u> (-K) LL123 (-K)	FC-M361 FC-M311 FC-TX801	42-32-22T	-	-	X	X	-	-
		FC-M361 FC-M311	48-38-28T	-	-	X	X	-	-
47.5+t mm	BB-UN26 (-K) D-NL (-K) <u>BB-UN100</u> (-K) D-NL(-K)	FC-M361 FC-M311	42-32-22T	X	X	-	-	-	-
		<u>FC-TY701</u> <u>FC-TY501</u> <u>FC-TY301</u> FC-M171-A FC-M171 FC-M131	42-34-24T	-	-	-	-	X	X
47.5 mm	BB-UN26 D-NL <u>BB-UN100</u> D-NL	FC-M171-A FC-M171 FC-M131	48-38-28T	-	-	X	X	-	-
		<u>FC-TY701</u> <u>FC-TY501</u> <u>FC-TY301</u> FC-M171-A FC-M171 FC-M131	42-34-24T	-	-	-	-	X	X

		Speed		8,7-speed		7,6-speed				7,6-speed	
		Chain line		47.5 / 47.5+t mm / 50.0 mm		47.5 / 47.5+t mm / 50.0 mm		47.5 / 47.5+t mm / 50.0 mm		47.5 mm	
		Chainstay angle		66°-69°	63°-66°	66° - 69°	63° - 66°	66° - 69°	63° - 66°	66° - 69°	66° - 69°
		Top swing FD		FD-M191-6 <u>FD-TY710-TS6</u>	FD-M191-3 <u>FD-TY710-TS3</u>	FD-TX50-6 <u>FD-TY500-TS6</u> <u>FD-TY10*</u> <u>FD-TY300*</u>	FD-TX50-3 <u>FD-TY500-TS3</u>	FD-TX51-6 <u>FD-TY510-TS6</u>	FD-TX51-3 <u>FD-TY510-TS3</u>	FD-TZ30	FD-TZ31
Chain line	BB Model No. / Structure	Down swing FD		-	-	-	-	-	-	-	-
50 mm	BB-ES25 (-K) 126 (K)	FC-M361-8	42-32-22T	-	-	-	-	-	-	-	-
		FC-M311-8		-	-	-	-	-	-	-	-
	BB-UN26 (-K) LL123 (-K) <u>BB-UN100</u> (-K) LL123 (-K)	FC-M361 FC-M311 FC-TX801	42-32-22T	-	-	-	-	-	-	-	-
47.5+t mm	BB-UN26 (-K) D-NL (-K) <u>BB-UN100</u> (-K) D-NL(-K)	FC-M361 FC-M311 FC-TX801	48-38-28T	X	X	-	-	X	X	-	-
		<u>FC-TY701</u> <u>FC-TY501</u> <u>FC-TY301</u> FC-M171-A FC-M171 FC-M131	42-34-24T	-	-	X	X	-	-	-	-
47.5 mm	BB-UN26 D-NL <u>BB-UN100</u> D-NL	FC-M171-A FC-M171 FC-M131	48-38-28T	X	X	-	-	X	X	-	-
		<u>FC-TY701</u> <u>FC-TY501</u> <u>FC-TY301</u> FC-M171-A FC-M171 FC-M131	42-34-24T	-	-	X	X	-	-	X	-
47.5 mm	BB-UN26 D-NL <u>BB-UN100</u> D-NL	FC-M171-A FC-M171 FC-M131	48-38-28T	X	X	-	-	X	X	-	X
		<u>FC-TY701</u> <u>FC-TY501</u> <u>FC-TY301</u> FC-M171-A FC-M171 FC-M131	42-34-24T	-	-	X	X	-	-	X	-

* FD-TY10 / TY300 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.

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.

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

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-TY10 FD-TY300	ø47.5		ø50.0
	FD-TZ31 FD-TZ30	ø47.5		-

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	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	Chain case						
10	SHIMANO	FC-M523	X	—	—	BB-ES25	—	118	—	—	
		FC-M522	X	—	—	BB-ES25	—	113	—	—	
9	SHIMANO	FC-M521	X	—	X*	BB-ES25-AK	—	**	—	—	
	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)	—	—	
		FC-M3000-8	X	—	—	BB-ES25(-E)	—	118(-E)	—	—	
	Acera	FC-M3000	—	X	—	BB-UN26(-E)	—	LL113(-E)	—	—	
		FC-T3010-8	X	—	X*	BB-ES25(-K)	—	126(-K)	—	—	
		FC-T3010	—	X	X*	BB-UN26(-K)	—	LL123(-K)	—	—	
		FC-M391-8	X	—	X*	BB-ES25(-K)	—	126(-K)	—	—	
		FC-M391	—	X	X*	BB-UN26(-K)	—	LL123(-K)	—	—	
		FC-M371	—	X	X*	BB-UN26(-K)	—	LL123(-K)	—	—	
	SHIMANO	FC-M351									
8, 7	Acera ALTUS	FC-M361	—	X	X*	BB-UN26(-K)	—	LL123(-K)	—	—	
		FC-M311									
	FC-M311-8	X	—	X*	BB-ES25(-K)	—	126(-K)	—	—	—	
	Tourney	FC-TX801	—	X	X*	BB-UN26(-K) BB-UN100 (-K)	—	LL123(-K)	—	—	
8, 7, 6	SHIMANO	FC-TY701 FC-TY501 FC-TY301 FC-M131 FC-M171 FC-M171-A	—	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-○○○○ (-K) / -K bottom bracket.

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

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

Separate type FC-BB compatibility [Capreo] C-451

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.

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	Chain case					
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.

Chain, chainring and cassette sprocket [MTB]

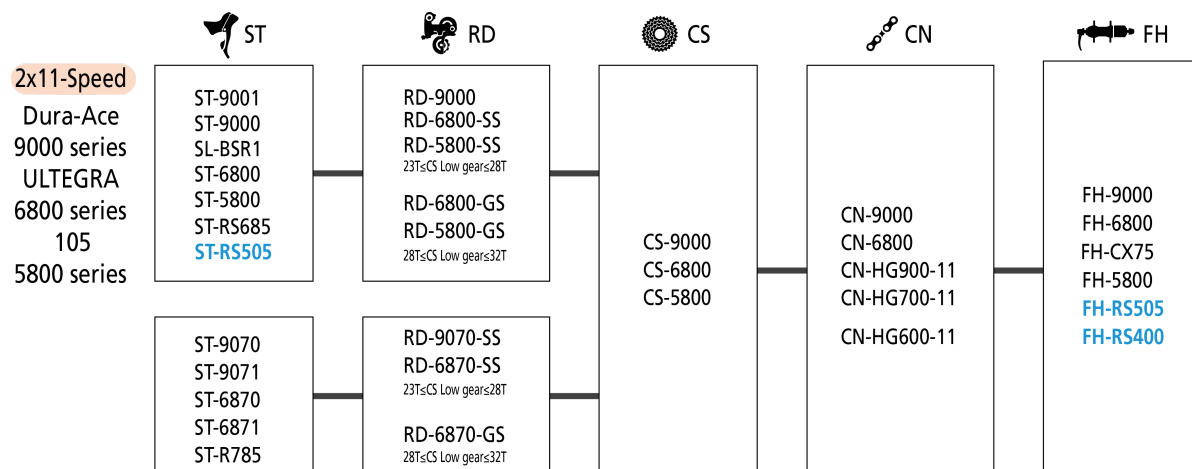
C-452

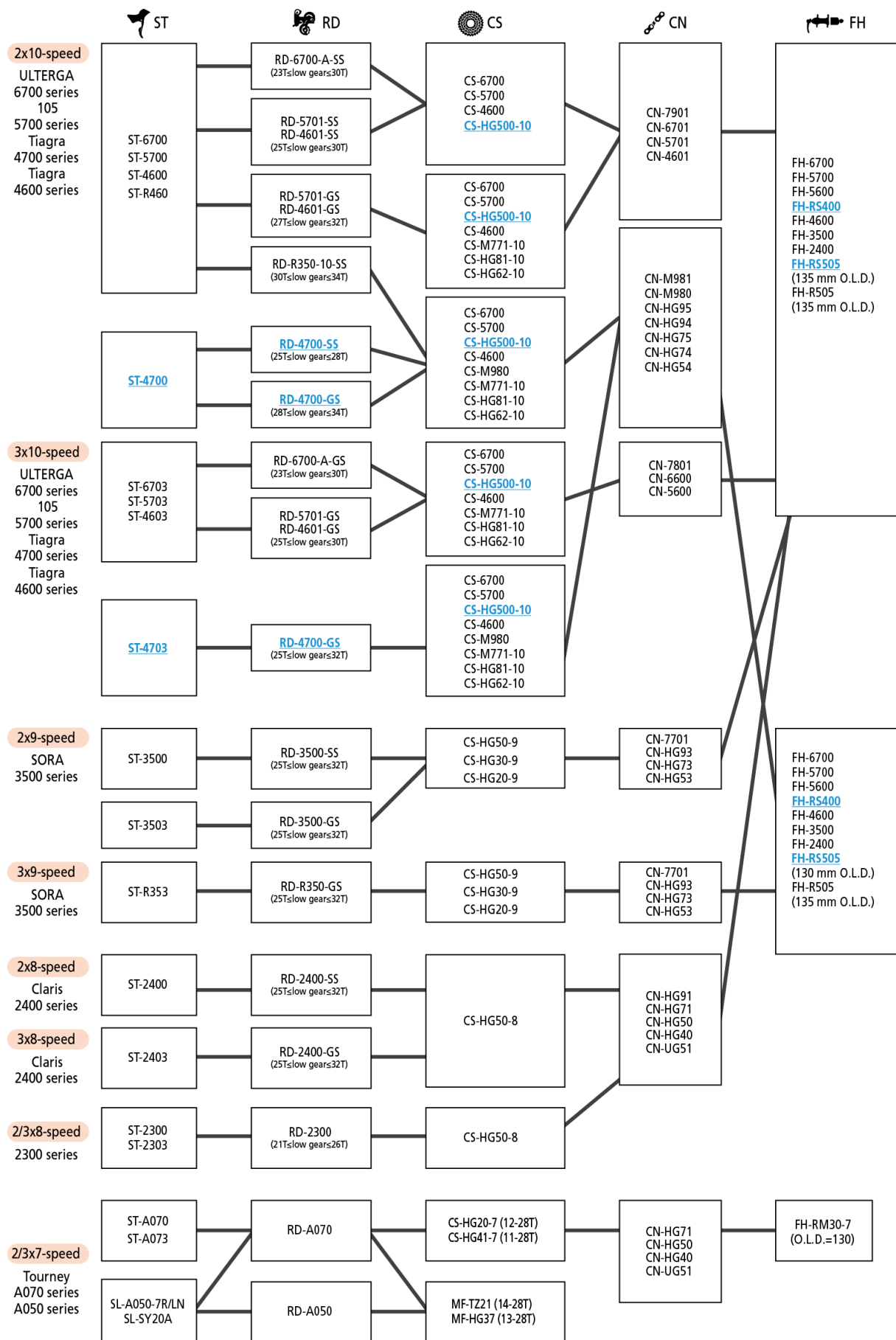
The allowable combinations are given in the chart below. These chains are available in order to match the type of drivetrain. Select the combination you desire after checking the chart below.

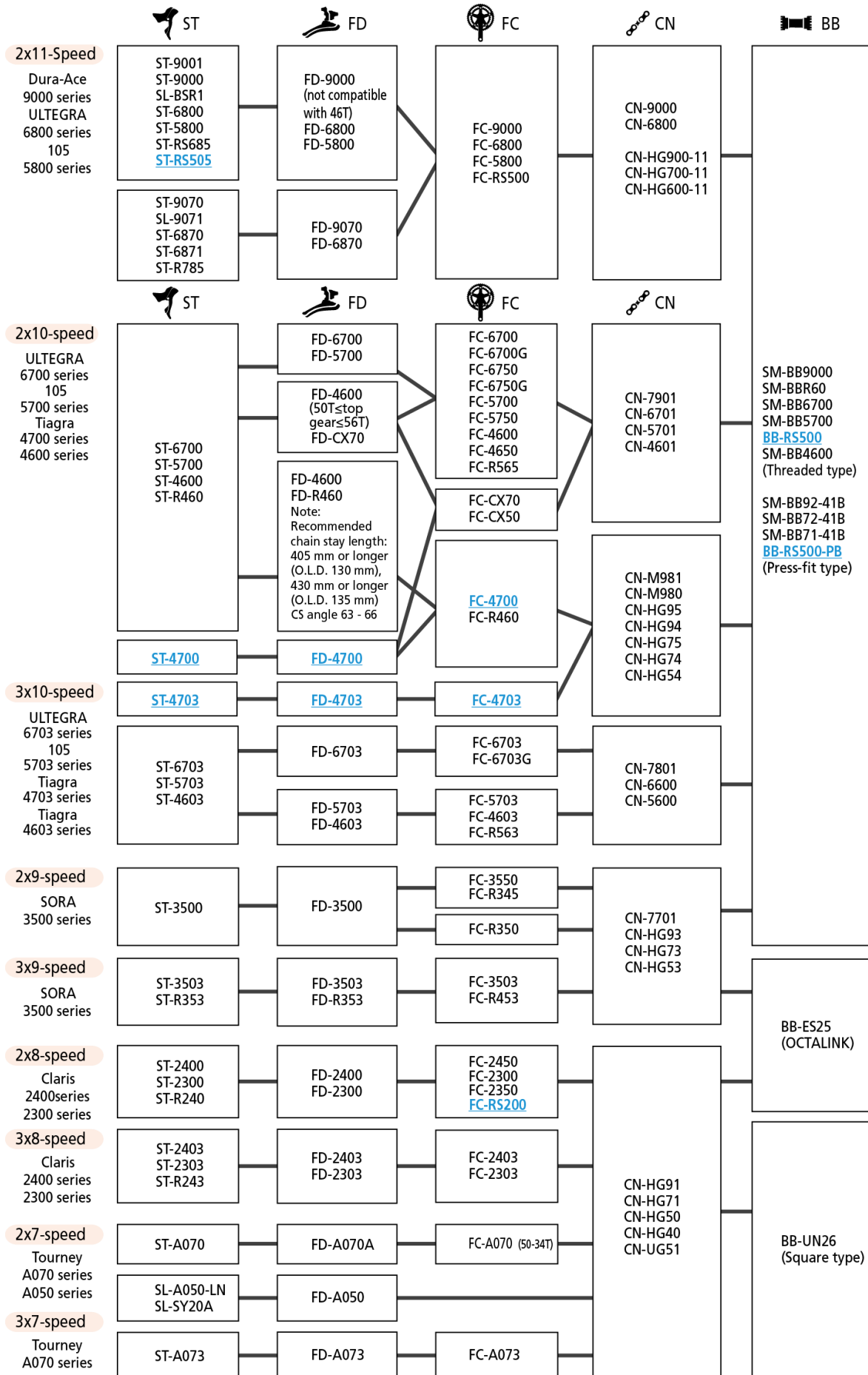
		9-speed		7, 8-speed	
		CS	FC	CS	FC
FC / CS		CS-M770 CS-HG80-9 CS-HG50-9 CS-HG400-9 CS-HG300-9 CS-HG200-9	FC-M770 FC-M665 FC-M591 FC-M590 FC-M543-K FC-M542 FC-M521 FC-M4060 FC-M4050 FC-T4060 FC-M4000 FC-T4010 FC-M430 FC-M430-8 FC-M3000-8 FC-M3000 FC-T3010-8 FC-T3010 FC-M391 FC-M391-8 FC-M371 FC-M351	CS-HG51-8 CS-HG41-8 CS-HG31-8 CS-HG200-8 CS-HG41-7 CS-HG20-7 CS-HG200-7	FC-M361 FC-M311 FC-M311-8 FC-TX801 FC-TY701 FC-TY501 FC-TY301 FC-M171 FC-M171-A FC-M131
CN	9-speed CN-HG93 CN-HG73 CN-HG53	X	X	-	-
	CN-HG91 CN-HG71 CN-HG40	-	-	X	X

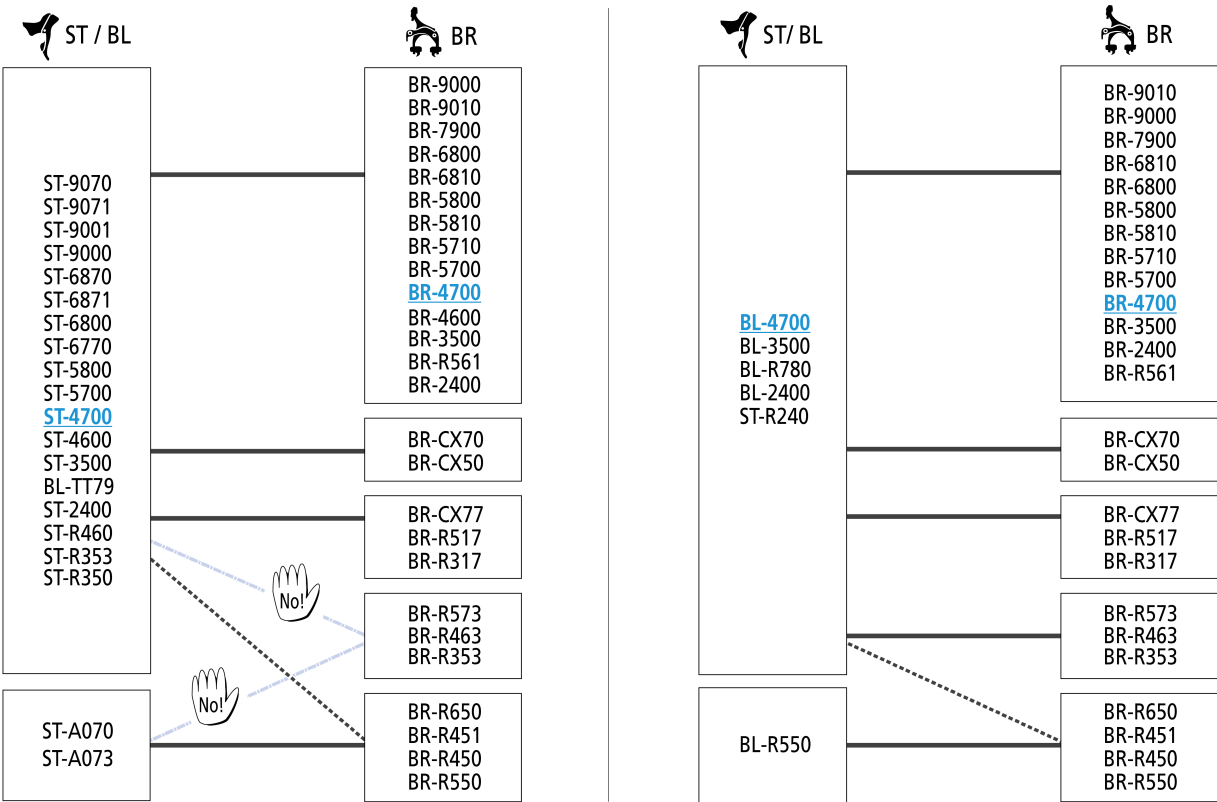
Rear drivetrain compatibility [ROAD]

C-454





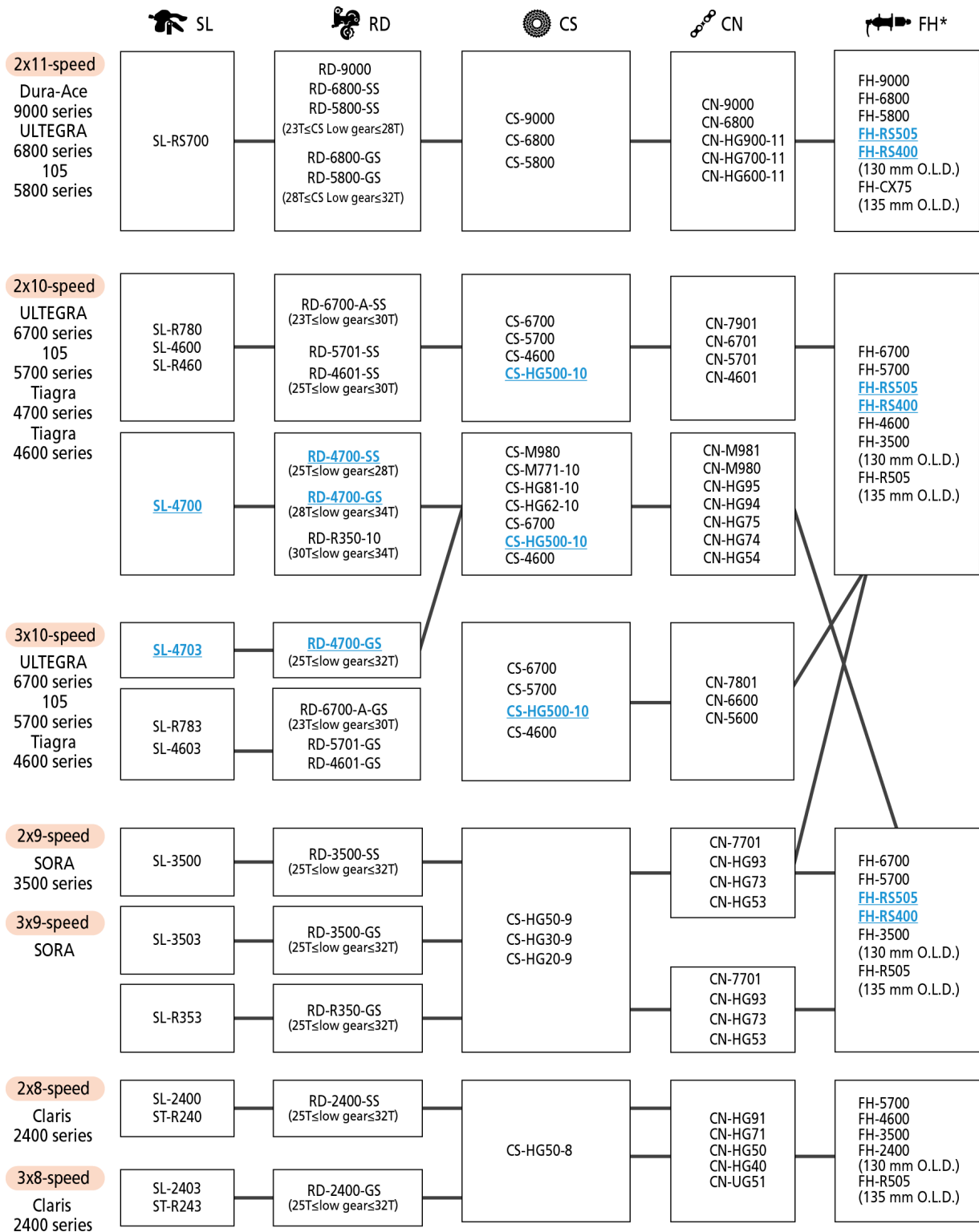




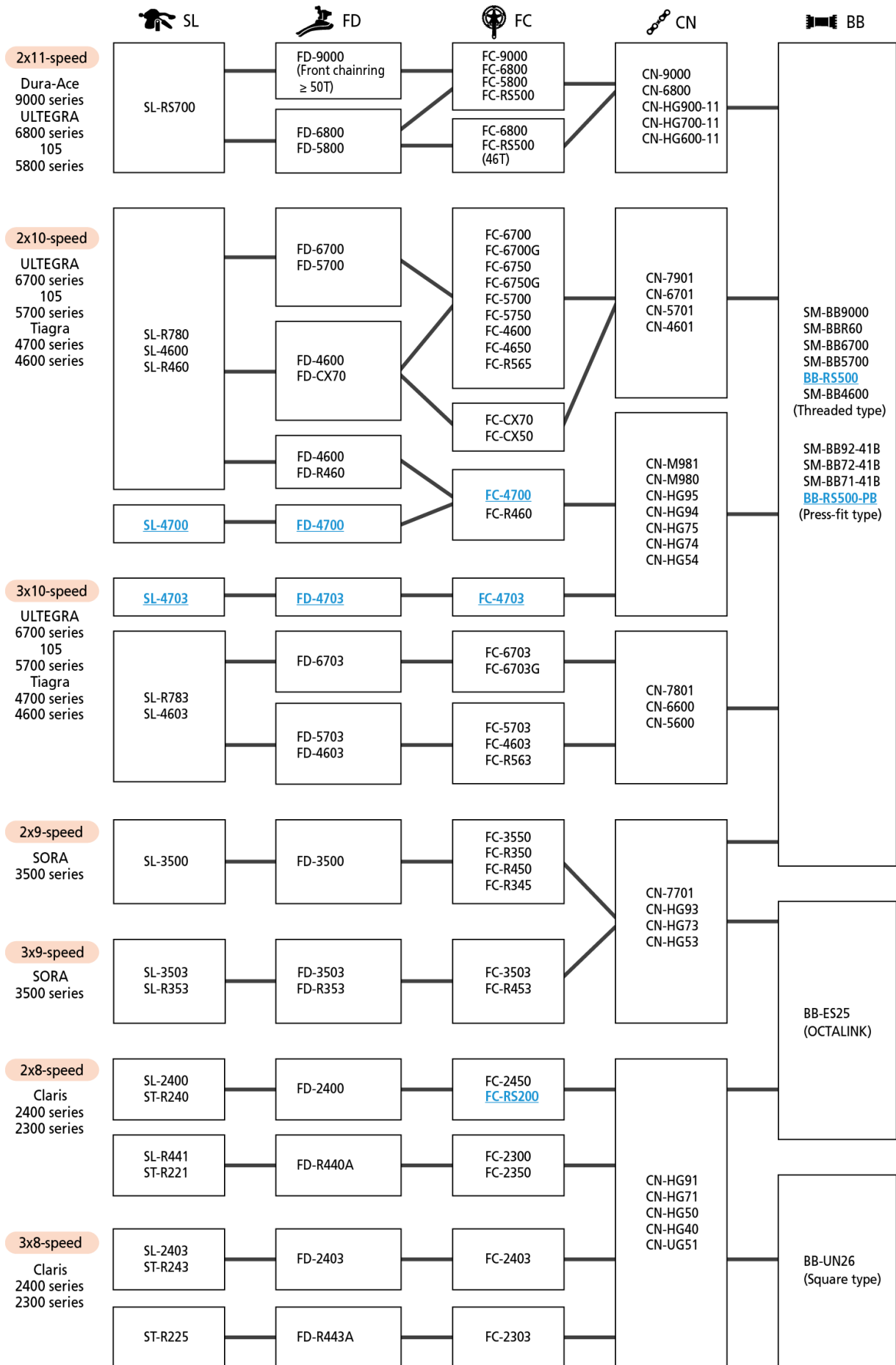
----- : Braking power is slightly less than standard combination.

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

Rear system C-458



Front system C-459



Disc brake caliper and Rotor compatibility

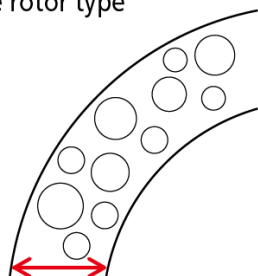
C-461

Caliper	Pad material	Type	Rotor size			
			203 mm (L)	180 mm (M)	160 mm (S)	140 mm (SS)
BR-M9000 BR-M9020 BR-M8000 BR-M785 BR-M675 BR-M615	Metal / Resin	Narrow	SM-RT99-L SM-RT86-L SM-RT81-L SM-RT68-L SM-RT76-L SM-RT64-L SM-RT66-L	SM-RT99-M SM-RT86-M SM-RT81-M SM-RT68-M SM-RT76-M SM-RT64-M SM-RT66-M	SM-RT99-S SM-RT86-S SM-RT81-S SM-RT68-S SM-RT76-S SM-RT64-S SM-RT66-S	SM-RT99-SS SM-RT81-SS
BR-M820 BR-M640	Metal / Resin					
BR-S700	Resin					
BR-T675 BR-T615 BR-M4050 BR-M447 BR-M446 BR-M416-A BR-M3050 BR-M395 BR-M375 BR-M355 BR-TX805 BR-R317	Resin	Wide	-	SM-RT20-M SM-RT30-M SM-RT54-M SM-RT56-M	SM-RT20-S SM-RT30-S SM-RT54-S SM-RT56-S	-
BR-RS805 BR-R785 BR-R5785 BR-RS505	Metal / Resin	Narrow	-	-	SM-RT99-S SM-RT86-S SM-RT81-S SM-RT68-S	SM-RT99-SS SM-RT81-SS
BR-CX77 BR-R517 BR-R317	Metal / Resin	Narrow	-	-	SM-RT98-S SM-RT86-S SM-RT81-S SM-RT76-S SM-RT75-S SM-RT64-S SM-RT66-S	-

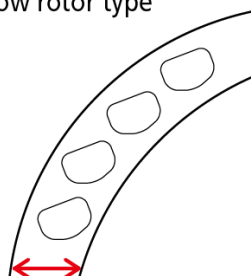
NOTE

1. Suitable mount adapter is necessary according to your frame mount style.
2. 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.
3. 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.
4. Durability of B-type pad become shorter when the pad is used with narrow type rotor.
5. Narrow type 2piece rotor are not compatible to caliper for Wide type rotor because of interference.
6. Please refer C-192 for BR models compatible with B / E-type pad.

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			
	140 mm (SS)	160 mm (S)	180 mm (M)	203 mm (L)
BR-T675 BR-T615 BR-M4050 BR-M447 BR-M446 BR-M3050 BR-M395 BR-M355	SM-RT99 SM-RT81	SM-RT99 SM-RT86 SM-RT81 SM-RT76	SM-RT99	SM-RT99 SM-RT86 SM-RT81 SM-RT76

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	Rotor	Pad
BR-M416-A BR-M375 BR-TX805	*	V-BRAKE BL (2 finger)	SM-RT54 SM-RT56 SM-RT30 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

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-M416-A	X	-	X
BR-M375	X	-	X
BR-TX805	X	-	X

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-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	BR-IM86 BR-IM81	BR-C6000 BR-C3010 BR-C3000
V-BRAKE Levers (2-finger)					
ST-M4000 ST-EF41 ST-TX800 ST-M370 ST-M310 ST-EF65 ST-EF51 ST-EF51-A	BL-T610 BL-M571 BL-T4000 BL-T3000 BL-MX70	X	X	NOTE	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		
V-BRAKE Levers with switch					
ST-R240	BL-4600 BL-R780 BL-4700 BL-3500 BL-2400	X	X		
Brake lever with switch					
ST-M310 (4-finger) SB-7545 ST-EF65 (4-finger) ST-EF51 (4-finger) ST-EF51-A (4-finger) SB-8S20-A ST-8S20	BL-IM45 BL-IM65 BL-IM60-A BL-C6000		X	X	X
Levers for Roller Brake			X	X	X
BL-C6010					

X: Yes



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

NOTE

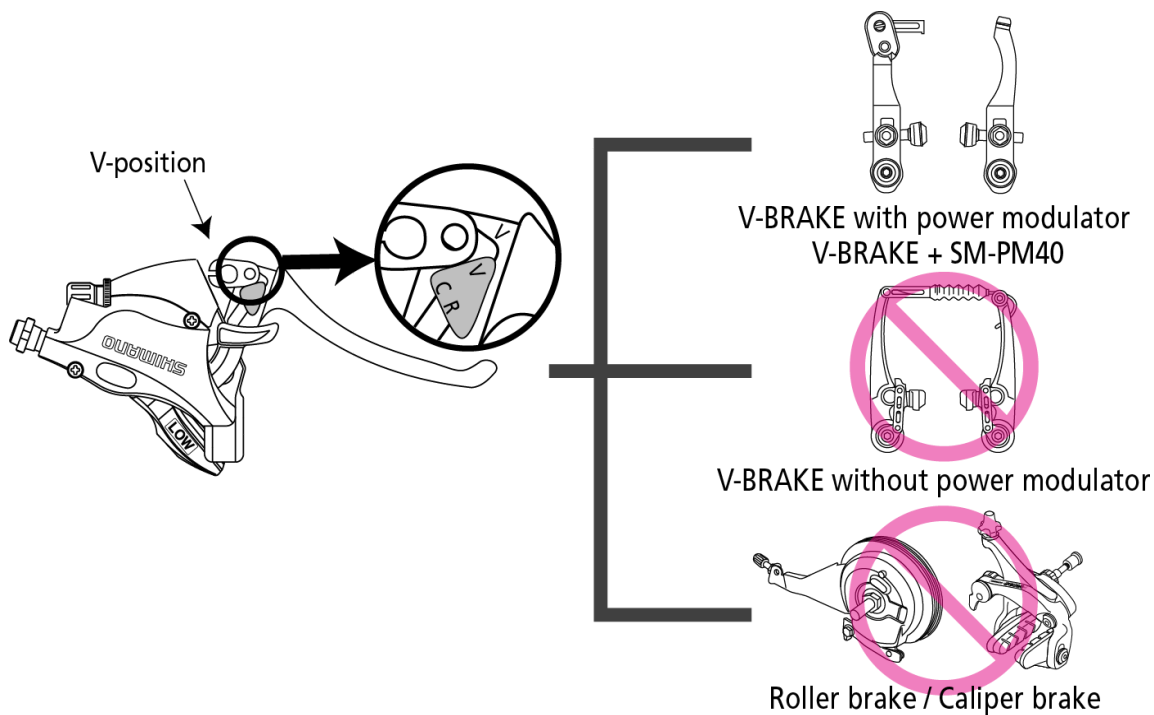
This combination will not provide the sufficient amount of braking force.

Brake lever with switch compatibility

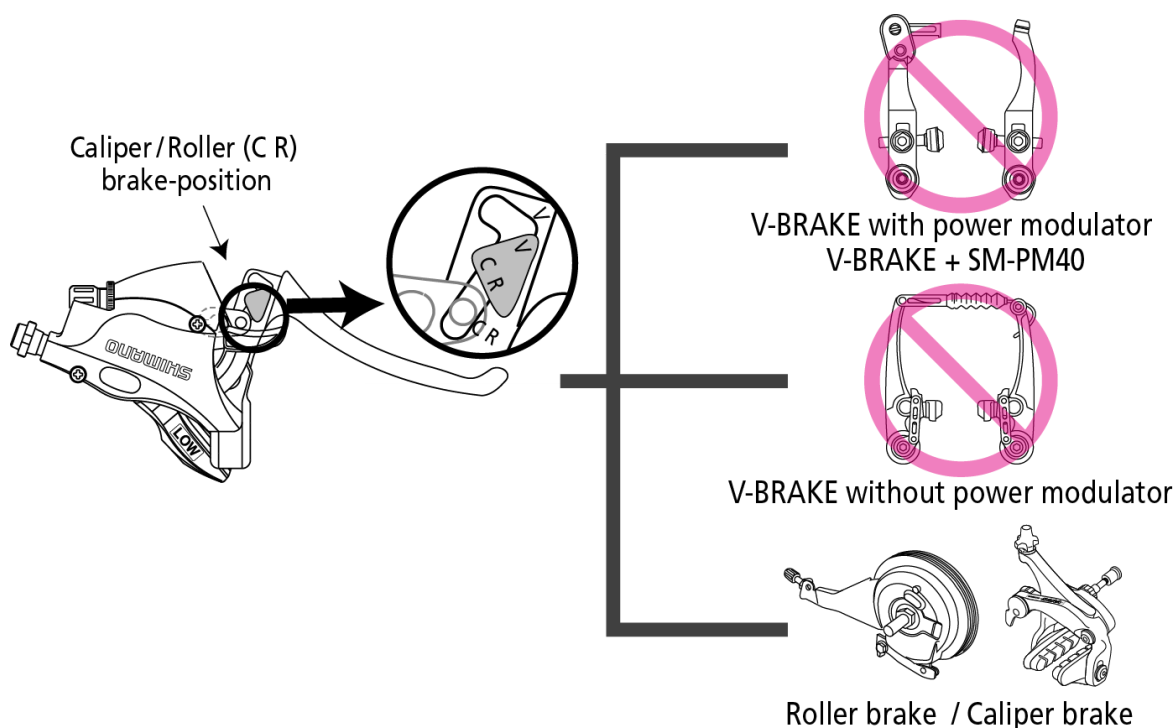
C-467

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



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.

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"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		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		OK	-	SM-GEAR	E	H	
							G	J	
			B	OK	-	SM-GEAR	E	H	
							G	J	
			C	OK	-	SM-GEAR	E	H	
							G	J	
			D	NR	CT-S500	CS-S500	F	I	*2
				OK	CT-S510	SM-GEAR	G	J	
		Coaster		OK	-	SM-GEAR	E	H	
							G	J	
			B	OK	-	SM-GEAR	E	H	
							G	J	
			C	OK	-	SM-GEAR	E	H	
							G	J	
			D	NR	CT-S500	-	-	-	*3
				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		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	
			D	OK	CT-S500	CS-S500	F	I	
				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.

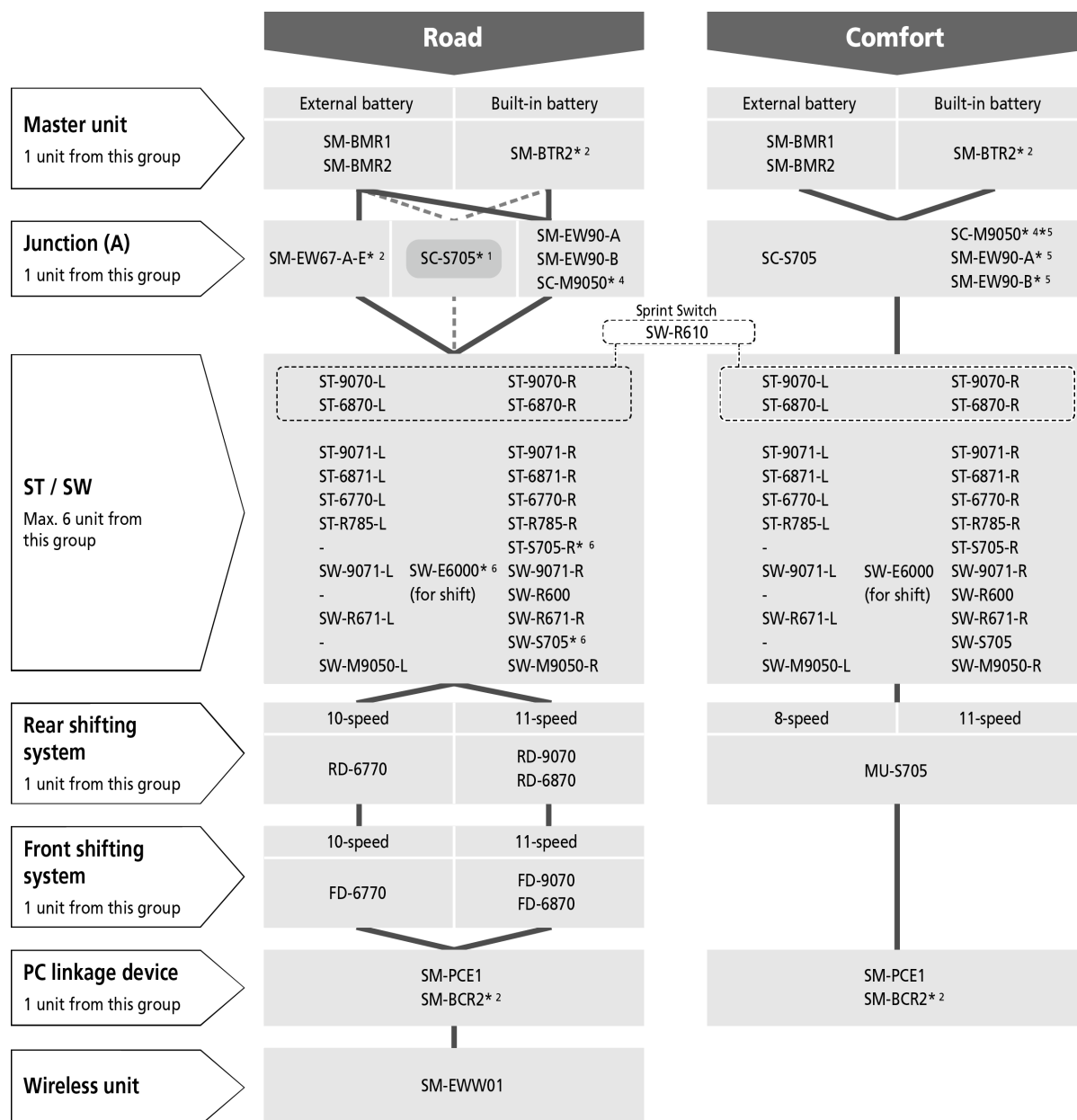
E-TUBE compatibility chart

C-473

This chart shows E-TUBE device compatibility based on latest version firmware as of Aug. 01, 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
- 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 .

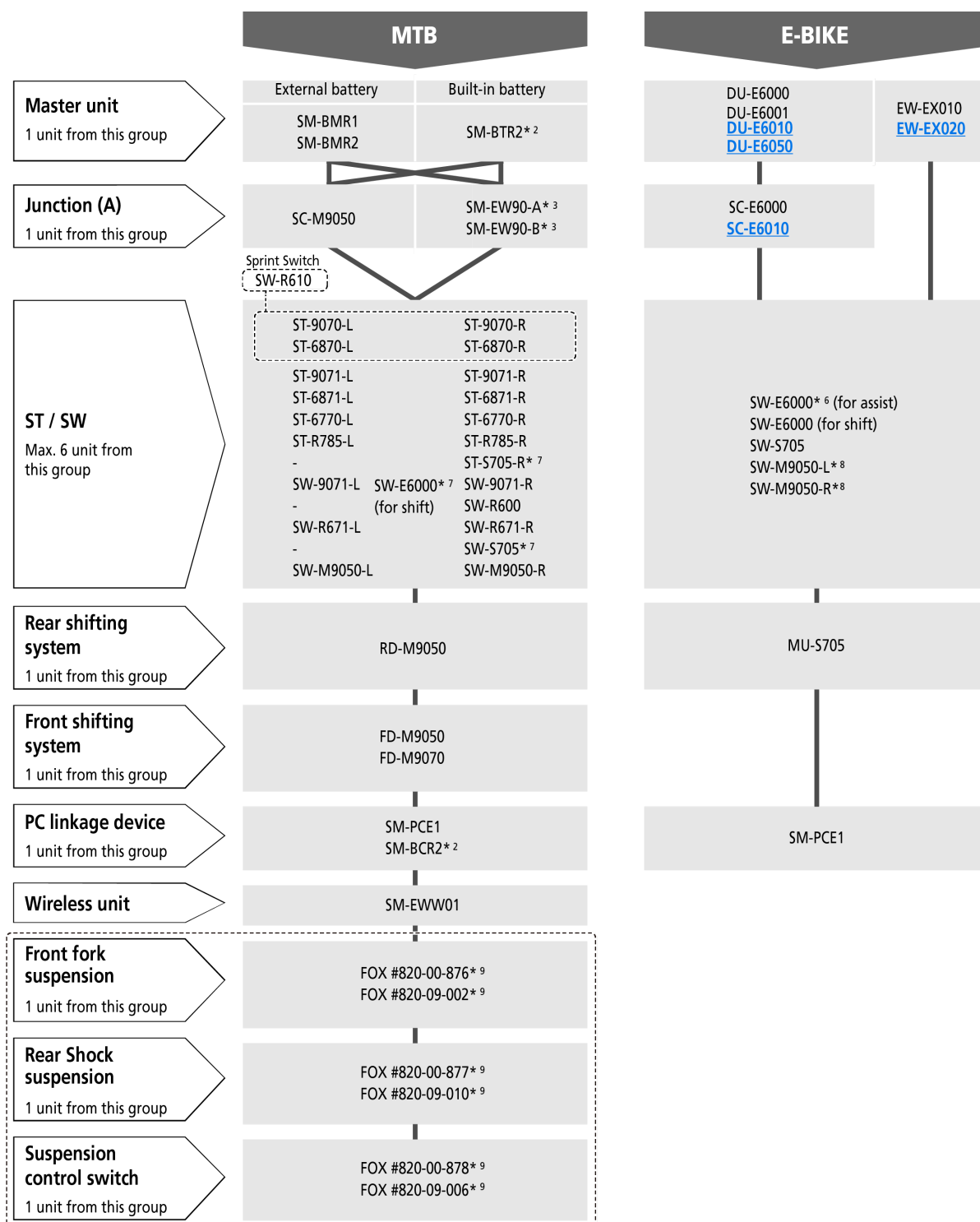
SM-EW67-A-E (Junction (A)) is not compatible with SM-BCR2 and SM-BTR2.

*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 in "Comfort" category

*6 Only for rear shifting



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 in "E-BIKE" category

*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/EW-EX020.

*7 Only for rear shifting (RD & IHG)

*8 For manual shifting only

*9 A designated control switch is needed operate the suspension system.