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This information was updated on April 21, 2009. 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 April 21, 2009, please refer to the Shimano Business Customer Web Site or directly contact the sales person of our company.

**\*\*REMARKS Mark X : available / Mark - : not available**

\*All information in this spec. handbook is confidential and has been given to you for the sole use of your product development staff! Issued on April 21, 2009  
SHIMANO INC.  
Printed in Japan

# Rear Derailleur (MTB) Specifications

Series	XTR	XTR	XTR	XTR	XTR	XTR	SAINT	SAINT
Model No.	RD-M971	RD-M971	RD-M972	RD-M972	RD-M970	RD-M970	RD-M810	RD-M810
Pulley Cage	GS	SGS	GS	SGS	GS	SGS	SS	GS
Speeds	9	9	9	9	9	9	9	9
Compatible with LG sprocket	-	-	-	-	-	-	-	-
Low-Normal Spring Type	-	-	-	-	X	X	-	-
Top-Normal Spring Type	X	X	X	X	-	-	X	X
Max Front Difference	22T	22T	22T	22T	22T	22T	Front single use	14T
Total Capacity	35T	43T	35T	45T	35T	43T	17/23T*	31/37T*
Max. Low Sprocket	34T	34T	36T	36T	34T	34T	28/36T*	28/36T*
Min. Low Sprocket	32T	32T	32T	32T	32T	32T	23/32T*	23/32T*
Min. Top Sprocket	11T	11T	11T	11T	11T	11T	11T	11T
Riveted Adapter	Road type	-	-	-	-	-	-	-
	Bmx-Track type	-	-	-	-	-	-	-
Direct Attachment	X	X	X	X	X	X	X	X
Detachable Bracket	-	-	-	-	-	-	-	-
Wheel-Type Cable Guide	-	-	-	-	-	-	-	-
Fluoric Coated Link Bushings	4	4	4	4	4	4	4	4
Sealed Bearing Guide Pulley	X	X	X	X	X	X	-	-
Ceramic bush Guide Pulley	-	-	-	-	-	-	X	X
Sealed Bearing Tension Pulley	X	X	X	X	X	X	X	X
Pulley teeth	11/11T	11/11T	11/11T	11/11T	11/11T	11/11T	11/11T	11/11T
Pulley Bolt Retainer	X	X	X	X	X	X	X	X
Bracket Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Painted
Plate Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Painted
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Painted
Outer Plate	Material	Aluminum	Aluminum	Carbon	Carbon	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	-	-	Anodized	Anodized	Painted
Inner Plate	Material	Aluminum	Aluminum	Carbon	Carbon	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	-	-	Anodized	Anodized	Painted
Removable Rubber Bumper	X	X	-	-	X	X	-	-
NOTE	with hollow bracket fixing bolt	with hollow bracket fixing bolt	SHIMANO SHADOW RD Bracket:Aluminum	SHIMANO SHADOW RD Bracket:Aluminum	with hollow bracket fixing bolt	with hollow bracket fixing bolt	SHIMANO SHADOW RD *Mode converter	SHIMANO SHADOW RD *Mode converter

# Rear Derailleur (MTB) Specifications

Series	Deore XT	Deore XT	Deore XT	Deore XT	Deore XT	Deore XT	SLX	SLX
Model No.	RD-M770	RD-M770	RD-M772	RD-M772	RD-M771	RD-M771	RD-M662	RD-M662
Pulley Cage	GS	SGS	GS	SGS	GS	SGS	GS	SGS
Speeds	9	9	9	9	9	9	9	9
Compatible with LG sprocket	-	-	-	-	-	-	-	-
Low-Normal Spring Type	X	X	-	-	-	-	-	-
Top-Normal Spring Type	-	-	X	X	X	X	X	X
Max Front Difference	22T	22T	22T	22T	22T	22T	22T	22T
Total Capacity	35T	45T	35T	45T	35T	45T	35T	45T
Max. Low Sprocket	34T	34T	36T	36T	34T	34T	36T	36T
Min. Low Sprocket	32T	32T	32T	32T	32T	32T	32T	32T
Min. Top Sprocket	11T	11T	11T	11T	11T	11T	11T	11T
Riveted Adapter	Road type	-	-	-	-	-	-	-
	Bmx-Track type	-	-	-	-	-	-	-
Direct Attachment	X	X	X	X	X	X	X	X
Detachable Bracket	-	-	-	-	-	-	-	-
Wheel-Type Cable Guide	-	-	-	-	-	-	-	-
Fluoric Coated Link Bushings	4	4	4	4	4	4	3	3
Sealed Bearing Guide Pulley	-	-	-	-	-	-	-	-
Ceramic bush Guide Pulley	X	X	X	X	X	X	-	-
Sealed Bearing Tension Pulley	X	X	X	X	X	X	-	-
Pulley teeth	11/11T	11/11T	11/11T	11/11T	11/11T	11/11T	11/11T	11/11T
Pulley Bolt Retainer	-	-	-	-	-	-	-	-
Bracket Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Plate Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Outer Plate	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Inner Plate	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Removable Rubber Bumper	X	X	-	-	X	X	-	-
NOTE	with hollow bracket fixing bolt	with hollow bracket fixing bolt	SHIMANO SHADOW RD Bracket:Steel	SHIMANO SHADOW RD Bracket:Steel	with hollow bracket fixing bolt	with hollow bracket fixing bolt	SHIMANO SHADOW RD Bracket:Steel	SHIMANO SHADOW RD Bracket:Steel

# Rear Derailleur (MTB) Specifications

Series	Deore LX	Deore	Deore	Deore	Alivio	Alivio	Acera	Acera
Model No.	RD-T661	RD-M592	RD-M591-L	RD-M591-S	RD-M410-L	RD-M410-NS	RD-M360-L	RD-M360-S
Pulley Cage	SGS	SGS	SGS	SGS	SGS	SGS	SGS	SGS
Speeds	9	9	9	9	8/7	7/8	7/8	7/8
Compatible with LG sprocket	-	-	-	-	-	-	-	-
Low-Normal Spring Type	-	-	-	-	-	-	-	-
Top-Normal Spring Type	X	X	X	X	X	X	X	X
Max Front Difference	22T	22T	22T	22T	20T	20T	20T	20T
Total Capacity	43T	45T	45T	45T	43T	43T	43T	43T
Max. Low Sprocket	32T	36T	34T	34T	34T	34T	34T	34T
Min. Low Sprocket	28T	32T	28T	28T	28T	28T	28T	28T
Min. Top Sprocket	11T	11T	11T	11T	11T	11T	11T	11T
Riveted Adapter	Road type	-	-	-	-	-	-	-
	Bmx-Track type	-	-	-	-	-	-	-
Direct Attachment	X	X	X	X	X	X	X	X
Detachable Bracket	-	-	-	-	-	-	-	-
Wheel-Type Cable Guide	-	-	-	-	-	-	-	-
Fluoric Coated Link Bushings	2	3	2	2	2	2	1	1
Sealed Bearing Guide Pulley	-	-	-	-	-	-	-	-
Ceramic bush Guide Pulley	-	-	-	-	-	-	-	-
Sealed Bearing Tension Pulley	-	-	-	-	-	-	-	-
Pulley teeth	11/11T	11/11T	11/11T	11/11T	13/13T	13/13T	13/13T	13/13T
Pulley Bolt Retainer	-	-	-	-	-	-	-	-
Bracket Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Plate Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Resin	Resin	Resin
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Inner Link	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Zinc Plated
Outer Plate	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Inner Plate	Material	Aluminum	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Zinc Plated	Zinc Plated	Zinc Plated
Removable Rubber Bumper	-	-	-	-	-	-	-	-
NOTE	with hollow bracket fixing bolt		Black Version	Silver Version	Black Version	Neutral Silver Version	Black Version	Silver Version

## Rear Derailleur (MTB) Specifications

Series	Altus	Altus	Tourney	Tourney	Tourney	Tourney	
Model No.	RD-M310-L	RD-M310-S	RD-TX71	RD-TX51	RD-TX31	RD-FT30	
Pulley Cage	Smart	Smart	Smart	Smart	Smart	SS	
Speeds	7/8	7/8	6/7	6/7	6/7	6/7	
Compatible with LG sprocket	-	-	-	-	-	-	
Low-Normal Spring Type	-	-	-	-	-	-	
Top-Normal Spring Type	X	X	X	X	X	X	
Max Front Difference	20T	20T	20T	20T	20T	Front single use	
Total Capacity	43T	43T	43T	43T	43T	17T	
Max. Low Sprocket	34T	34T	34T	34T	34T	28T	
Min. Low Sprocket	28T	28T	28T	28T	28T	28T	
Min. Top Sprocket	11T	11T	11T	11T	11T	11T	
Riveted Adapter							
Road type	-	-	X	X	X	X	
Bmx-Track type	-	-	-	X	X	X	
Direct Attachment	X	X	X	X	X	X	
Detachable Bracket	-	-	-	-	-	-	
Wheel-Type Cable Guide	-	-	X	X	-	X	
Fluoric Coated Link Bushings	-	-	-	-	-	-	
Sealed Bearing Guide Pulley	-	-	-	-	-	-	
Ceramic bush Guide Pulley	-	-	-	-	-	-	
Sealed Bearing Tension Pulley	-	-	-	-	-	-	
Pulley teeth	13/15T	13/15T	13/15T	13/15T	13/15T	11T	
Pulley Bolt Retainer	-	-	-	-	-	-	
Bracket Body	Material	Aluminum	Aluminum	Resin	Resin	Resin	Steel
	Finish	Painted	Painted	-	-	-	Painted
Plate Body	Material	Resin	Resin	Resin	Resin	Resin	Steel
	Finish	-	-	-	-	-	Painted
Outer Link	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Plated	Plated	Painted	Painted
Inner Link	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Zinc Plated	Zinc Plated	Painted	Painted	Painted	Painted
Outer Plate	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Chrome Plated	Pearl Bright
Inner Plate	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Painted
Removable Rubber Bumper	-	-	-	-	-	-	
NOTE	Black Version	Silver Version				For folding bike with over 16inch wheel.	

## Rear Derailleur (MTB) Specifications

Series		Tourney	Tourney	Tourney
Model No.		RD-TZ50	RD-TY18	RD-TY18
Pulley Cage		GS	SS	GS
Speeds		6	6	6
Compatible with LG sprocket		-	-	-
Low-Normal Spring Type		-	-	-
Top-Normal Spring Type		X	X	X
Max Front Difference		20T	13T	20T
Total Capacity		34T	28T	34T
Max. Low Sprocket		28T	28T	28T
Min. Low Sprocket		28T	28T	28T
Min. Top Sprocket		14T	14T	14T
Riveted Adapter	Road type	X	X	X
	Bmx-Track type	-	-	-
Direct Attachment		X	X	X
Detachable Bracket		-	-	-
Wheel-Type Cable Guide		-	-	-
Fluoric Coated Link Bushings		-	-	-
Sealed Bearing Guide Pulley		-	-	-
Ceramic bush Guide Pulley		-	-	-
Sealed Bearing Tension Pulley		-	-	-
Pulley teeth		11T	10T	10T
Pulley Bolt Retainer		-	-	-
Bracket Body	Material	Steel	Steel	Steel
	Finish	Painted	Zinc Plated	Zinc Plated
Plate Body	Material	Resin	Steel	Steel
	Finish	-	Zinc Plated	Zinc Plated
Outer Link	Material	Steel	Steel	Steel
	Finish	Painted	Painted	Painted
Inner Link	Material	Steel	Steel	Steel
	Finish	Painted	Zinc Plated	Zinc Plated
Outer Plate	Material	Steel	Steel	Steel
	Finish	Painted	Zinc Plated	Zinc Plated
Inner Plate	Material	Steel	Steel	Steel
	Finish	Painted	Zinc Plated	Zinc Plated
Removable Rubber Bumper		-	-	-
NOTE				

# Front Derailleur (MTB) Specifications

Series	XTR	XTR	XTR	SAINT	SAINT	Deore XT	
Model No.	FD-M970	FD-M970-E	FD-M971	FD-M817	FD-M815	FD-M770	
Rear Speeds	9	9	9	9	9	9	
Front SIS	X	X	X	X	X	X	
Chain Ring	Triple	Triple	Triple	Double	Double	Triple	
Top Swing Link	X	X	-	-	X	X	
E-type BB Mount	-	X	-	-	-	-	
Direct mount	-	-	-	-	-	-	
Applicable Chain Line	50mm	50mm	50mm	54.3mm	54.3mm	50mm	
Top Gear Teeth	44T	44T	44T	36T	36T	44/48T	
Total Capacity	22T	22T	22T	14T	14T	22T	
Top-Middle Capacity	12T	12T	12T	-	-	12T	
Chainstay Angle (degree)	66-69	66-69	66-69	65-71	65-71	66-69	
Dual Pull	X	X	X	X	X	X	
Multi Clamp Band	X	-	X	X	X	X	
Offset Adjust Bolt	X	X	X	X	X	X	
28.6mm	Cable route	Top	X (w/AdapterS)	X	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
		Down	X (w/AdapterS)	X	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
31.8mm	Cable route	Top	X (w/AdapterM)	X	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
		Down	X (w/AdapterM)	X	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
34.9mm	Cable route	Top	X	X	X	X	X
		Down	X	X	X	X	X
Front Clamp Band	Material	Aluminum	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	-	Anodized	Painted	Painted	Painted
Rear Clamp Band	Material	Aluminum	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	-	Anodized	Painted	Painted	Painted
BB Plate	Material	-	Aluminum	-	-	-	
Outer Link	Material	Steel	Steel	Aluminum	Aluminum	Steel	Steel
	Finish	Painted	Painted	Anodized	Painted	Painted	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Chain Guide	Material	Aluminum	Aluminum	Steel	Steel	Steel	Steel
	Finish	Nickel Plated	Nickel Plated	Nickel Plated	Chrome Plated	Chrome Plated	Chrome Plated
Note		Without BB Plate option is available		*For 150mm O.L.D with 83mm BB shell width *For 165mm O/D Bash guard	*For 150mm O.L.D with 83mm BB shell width *For 165mm O/D Bash guard		

# Front Derailleur (MTB) Specifications

Series	Deore XT	Deore XT	Deore XT	Deore XT	Deore XT	SLX		
Model No.	FD-M770-E	FD-M771	FD-M771-D	FD-M772A	FD-M773	FD-M660		
Rear Speeds	9	9	9	9	9	9		
Front SIS	X	X	X	X	X	X		
Chain Ring	Triple	Triple	Triple	Triple	Triple	Triple		
Top Swing Link	X	-	-	X	-	X		
E-type BB Mount	X	-	-	-	-	-		
Direct mount	-	-	X	-	-	-		
Applicable Chain Line	50mm	50mm	50mm	50mm	50mm	50mm		
Top Gear Teeth	44T	44T	44T	44/48T	44/48T	44/48T		
Total Capacity	22T	22T	22T	22T	22T	22T		
Top-Middle Capacity	12T	12T	12T	12T	12T	12T		
Chainstay Angle (degree)	66-69	66-69	66-69	63-66	63-66	66-69		
Dual Pull	X	X	X	X	X	X		
Multi Clamp Band	-	X	-	X	X	X		
Offset Adjust Bolt	X	X	X	-	-	X		
28.6mm	Cable route	Top	X	X (w/AdapterS)	-	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
		Down	X	X (w/AdapterS)	-	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
31.8mm	Cable route	Top	X	X (w/AdapterM)	-	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
		Down	X	X (w/AdapterM)	-	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
34.9mm	Cable route	Top	X	X	-	X	X	X
		Down	X	X	-	X	X	X
Front Clamp Band	Material	-	Aluminum	-	Aluminum	Aluminum	Aluminum	
	Finish	-	Painted	-	Painted	Painted	Painted	
Rear Clamp Band	Material	-	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	-	Painted	Painted	Painted	Painted	Painted	
BB Plate	Material	Aluminum	-	-	-	-		
Outer Link	Material	Steel	Aluminum	Aluminum	Steel	Aluminum	Steel	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel		
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	
Note	Without BB Plate option is available		*Outer cable stopper integrated design					



# Front Derailleur (MTB) Specifications

Series	SLX	SLX	SLX	SLX	SLX	SLX		
Model No.	FD-M660-E	FD-M661	FD-M661-D	FD-M665	FD-M665-E	FD-M667		
Rear Speeds	9	9	9	9	9	9		
Front SIS	X	X	X	X	X	X		
Chain Ring	Triple	Triple	Triple	Double	Double	Double		
Top Swing Link	X	-	-	X	X	-		
E-type BB Mount	X	-	-	-	X	-		
Direct mount	-	-	X	-	-	-		
Applicable Chain Line	50mm	50mm	50mm	46.8mm	46.8mm	46.8mm		
Top Gear Teeth	44T	44T	44T	36T	36T	36T		
Total Capacity	22T	22T	22T	14T	14T	14T		
Top-Middle Capacity	12T	12T	12T	-	-	-		
Chainstay Angle (degree)	66-69	66-69	66-69	65-71	65-71	65-71		
Dual Pull	X	X	X	X	X	X		
Multi Clamp Band	-	X	-	X	-	X		
Offset Adjust Bolt	X	X	X	X	X	X		
28.6mm	Cable route	Top	X	X (w/AdapterS)	-	X (w/AdapterS)	X	X (w/AdapterS)
		Down	X	X (w/AdapterS)	-	X (w/AdapterS)	X	X (w/AdapterS)
31.8mm	Cable route	Top	X	X (w/AdapterM)	-	X (w/AdapterM)	X	X (w/AdapterM)
		Down	X	X (w/AdapterM)	-	X (w/AdapterM)	X	X (w/AdapterM)
34.9mm	Cable route	Top	X	X	-	X	X	X
		Down	X	X	-	X	X	X
Front Clamp Band	Material	-	Aluminum	-	Aluminum	-	Aluminum	
	Finish	-	Painted	-	Painted	-	Painted	
Rear Clamp Band	Material	-	Aluminum	Aluminum	Aluminum	-	Aluminum	
	Finish	-	Painted	Painted	Painted	-	Painted	
BB Plate	Material	Aluminum	-	-	-	Aluminum	-	
Outer Link	Material	Steel	Aluminum	Aluminum	Steel	Steel	Aluminum	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	
Note	Without BB Plate option is available			*Outer cable stopper integrated design	*Designed for 165mm O/D Bash guard	*Designed for 165mm O/D Bash guard. Without BB Plate option is available	*Designed for 165mm O/D Bash guard	

# Front Derailleur (MTB) Specifications

Series	Deore LX	Deore LX	Deore LX	Deore LX	Deore LX	Deore	
Model No.	FD-T661-3	FD-T661-6	FD-T660-A3	FD-T660-6	FD-M580-E	FD-M590-6	
Rear Speeds	9	9	9	9	9	9	
Front SIS	X	X	X	X	X	X	
Chain Ring	Triple	Triple	Triple	Triple	Triple/Double	Triple	
Top Swing Link	-	-	X	X	X	X	
E-type BB Mount	-	-	-	-	X	-	
Direct mount	-	-	-	-	-	-	
Applicable Chain Line	50mm	50mm	50mm	50mm	50mm	50mm	
Top Gear Teeth	44T/48T	44T/48T	44T/48T	44T/48T	44 T	44T/48T	
Total Capacity	22T	22T	22T	22T	22T	22T	
Top-Middle Capacity	12T	12T	12T	12T	12T	12T	
Chainstay Angle (degree)	63-66	66-69	63-66	66-69	66-69	66-69	
Dual Pull	X	X	X	X	-	X	
Multi Clamp Band	X	X	X	X	-	X	
Offset Adjust Bolt	-	-	-	-	-	-	
28.6mm	Cable route	Top	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
		Down	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
31.8mm	Cable route	Top	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
		Down	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
34.9mm	Cable route	Top	X	X	X	X	X
		Down	X	X	X	X	X
Front Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	-	Aluminum
	Finish	Painted	Painted	Painted	Painted	-	Painted
Rear Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	-	Aluminum
	Finish	Painted	Painted	Painted	Painted	-	Painted
BB Plate	Material	-	-	-	-	Aluminum	-
Outer Link	Material	Aluminum	Aluminum	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Pearl Bright
Note		Angled clamp band	Angled clamp band	Angled clamp band	Angled clamp band		Angled clamp band

# Front Derailleur (MTB) Specifications

Series	Deore		Deore	Deore	Deore	Deore	Deore
Model No.	FD-M590-3		FD-M591-6	FD-M591-3	FD-M511-3	FD-M511-6	FD-M510-3
Rear Speeds	9		9	9	9	9	9
Front SIS	X		X	X	X	X	X
Chain Ring	Triple		Triple	Triple	Triple	Triple	Triple
Top Swing Link	X		-	-	-	-	X
E-type BB Mount	-		-	-	-	-	-
Direct mount	-		-	-	-	-	-
Applicable Chain Line	50mm		50mm	50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm
Top Gear Teeth	44T/48T		44T/48T	44T/48T	44 / 48T	44 / 48T	44 / 48T
Total Capacity	22T		22T	22T	22T	22T	22T
Top-Middle Capacity	12T		12T	12T	12T	12T	12T
Chainstay Angle (degree)	63-66		66-69	63-66	63-66	66-69	63-66
Dual Pull	X		X	X	X	X	X
Multi Clamp Band	X		X	X	X	X	X
Offset Adjust Bolt	-		-	-	-	-	-
28.6mm	Cable route	Top	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
		Down	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)
31.8mm	Cable route	Top	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
		Down	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)
34.9mm	Cable route	Top	X	X	X	X	X
		Down	X	X	X	X	X
Front Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Rear Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
BB Plate	Material	-	-	-	-	-	-
Outer Link	Material	Steel	Aluminum	Aluminum	Aluminum	Aluminum	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	Chrome Plated
Note	Angled clamp band		Angled clamp band	Angled clamp band			Angled clamp band

# Front Derailleur (MTB) Specifications

Series	Deore	Alivio	Alivio	Alivio	Alivio	Alivio	
Model No.	FD-M510-6	FD-M413-3	FD-M413-6	FD-M412-3	FD-M412-6	FD-M410-E	
Rear Speeds	9	8/7	8/7	8/7	8/7	8/7	
Front SIS	X	X	X	X	X	X	
Chain Ring	Triple	Triple	Triple	Triple	Triple	Triple	
Top Swing Link	X	-	-	X	X	X	
E-type BB Mount	-	-	-	-	-	X	
Direct mount	-	-	-	-	-	-	
Applicable Chain Line	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	50mm	
Top Gear Teeth	44 / 48T	42T/48T	42T/48T	42T/48T	42T/48T	42T	
Total Capacity	22T	20T	20T	20T	20T	20T	
Top-Middle Capacity	12T	10T	10T	10T	10T	10T	
Chainstay Angle (degree)	66-69	63-66	66-69	63-66	66-69	·New Slotted E-type ·Chainstay Angle: 63 to 69 degrees	
Dual Pull	X	X	X	X	X	X	
Multi Clamp Band	X	X	X	X	X	-	
Offset Adjust Bolt	-	-	-	-	-	-	
Cable route	28.6mm	Top	X (w/AdapterS)	X(w/AdapterS)	X(w/AdapterS)	X (w/AdapterS)	·New Slotted E-type ·Chainstay Angle: 63 to 69 degrees
		Down	X (w/AdapterS)	X(w/AdapterS)	X(w/AdapterS)	X (w/AdapterS)	
	31.8mm	Top	X (w/AdapterM)	X(w/AdapterM)	X(w/AdapterM)	X (w/AdapterM)	
		Down	X (w/AdapterM)	X(w/AdapterM)	X(w/AdapterM)	X (w/AdapterM)	
	34.9mm	Top	X	X	X	X	
		Down	X	X	X	X	
Front Clamp Band	Material	Aluminum	Steel	Steel	Steel	Steel	-
	Finish	Painted	Painted	Painted	Painted	Painted	-
Rear Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	-
	Finish	Painted	Painted	Painted	Painted	Painted	-
BB Plate	Material	-	-	-	-	-	Aluminum(Painted)
Outer Link	Material	Steel	Aluminum	Aluminum	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome Plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated
Note	Angled clamp band	Neutral Silver Version	Neutral Silver Version				New slotted E-type

# Front Derailleur (MTB) Specifications

Series	Acera	Acera	Acera	Altus	Altus	Altus		
Model No.	FD-M360-3	FD-M360-6	FD-M330	FD-M311-3	FD-M311-6	FD-M310-3		
Rear Speeds	8/7	8/7	8/7	8/7	8/7	8/7		
Front SIS	X	X	X	X	X	X		
Chain Ring	Triple	Triple	Triple	Triple	Triple	Triple		
Top Swing Link	X	X	X	-	-	X		
E-type BB Mount	-	-	-	-	-	-		
Direct mount	-	-	-	-	-	-		
Applicable Chain Line	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm		
Top Gear Teeth	42T/48T	42T/48T	42T	42T/48T	42T/48T	42T/48T		
Total Capacity	20T	20T	20T	20T	20T	20T		
Top-Middle Capacity	10T	10T	10T	10T	10T	10T		
Chainstay Angle (degree)	63-66	66-69	63-66/ 66-69	63-66	66-69	63-66		
Dual Pull	X	X	-	X	X	X		
Multi Clamp Band	X	X	-	X	X	X		
Offset Adjust Bolt	-	-	-	-	-	-		
28.6mm	Cable route	Top	X (w/AdapterS)	X (w/AdapterS)	X	X(w/AdapterS)	X(w/AdapterS)	X (w/AdapterS)
		Down	X (w/AdapterS)	X (w/AdapterS)	X	X(w/AdapterS)	X(w/AdapterS)	X (w/AdapterS)
31.8mm	Cable route	Top	X (w/AdapterM)	X (w/AdapterM)	X	X(w/AdapterM)	X(w/AdapterM)	X (w/AdapterM)
		Down	X (w/AdapterM)	X (w/AdapterM)	X	X(w/AdapterM)	X(w/AdapterM)	X (w/AdapterM)
34.9mm	Cable route	Top	X	X	-	X	X	X
		Down	X	X	-	X	X	X
Front Clamp Band	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Pearl Bright	Painted	Painted	Painted	
Rear Clamp Band	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
BB Plate	Material	-	-	-	-	-	-	
Outer Link	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Zinc Plated	Painted	Painted	Painted	
Inner Link	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome plated	Chrome plated	Chrome plated	
Note								

# Front Derailleur (MTB) Specifications

Series	Altus	Non-series	Non-series	Non-series	Non-series	C-Series	
Model No.	FD-M310-6	FD-M190-3	FD-M190A-6	FD-M191-3	FD-M191-6	FD-C101-E	
Rear Speeds	8/7	8/7	8/7	8/7	8/7	8/7	
Front SIS	X	X	X	X	X	X	
Chain Ring	Triple	Triple	Triple	Triple	Triple	Triple	
Top Swing Link	X	X	X	X	X	X	
E-type BB Mount	-	-	-	-	-	w/o Bolt	
Direct mount	-	-	-	-	-	-	
Applicable Chain Line	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	
Top Gear Teeth	42T/48T	42T	42T	48T	48T	42T	
Total Capacity	20T	18T	18T	20T	20T	18T	
Top-Middle Capacity	10T	8T	8T	10T	10T	8T	
Chainstay Angle (degree)	66-69	63-66	66-69	63-66	66-69	63-66/ 66-69	
Dual Pull	X	X	X	X	X	X	
Multi Clamp Band	X	X	X	X	X	-	
Offset Adjust Bolt	-	-	-	-	-	-	
28.6mm	Cable route	Top	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X
		Down	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X
31.8mm	Cable route	Top	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X
		Down	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X
34.9mm	Cable route	Top	X	X	X	X	X*
		Down	X	X	X	X	X*
Front Clamp Band	Material	Steel	Steel	Steel	Steel	Steel	-
	Finish	Painted	Painted	Painted	Painted	Painted	-
Rear Clamp Band	Material	Steel	Steel	Steel	Steel	Steel	-
	Finish	Painted	Painted	Painted	Painted	Painted	-
BB Plate	Material	-	-	-	-	-	Steel
Outer Link	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated
Inner Link	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Note							*For 47.5mm chain- line :BB 68mm 50mm chain-line :BB 73mm

# Front Derailleur (MTB) Specifications

Series	C-Series	C-Series	C-Series	Tourney	Tourney	Tourney	Tourney	Tourney		
Model No.	FD-C051	FD-C051	FD-C050	FD-TX50-3	FD-TX50-6	FD-TX51-3	FD-TX51-6	FD-TY10		
Rear Speeds	7/6	7/6	7/6	7/6	7/6	7/6	7/6	7/6		
Front SIS	X	X	X	X	X	X	X	X		
Chain Ring	Triple	Triple	Triple	Triple	Triple	Triple	Triple	Triple		
Top Swing Link	X	X	X	X	X	X	X	-		
E-type BB Mount	-	-	-	-	-	-	-	-		
Direct mount	-	-	-	-	-	-	-	-		
Applicable Chain Line	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5 / 50mm	47.5mm		
Top Gear Teeth	48T	48T	42T	42T	42T	48T	48T	42T		
Total Capacity	20T	20T	18T	18T	18T	20T	20T	18T		
Top-Middle Capacity	10T	10T	8T	8T	8T	10T	10T	8T		
Chainstay Angle (degree)	66-69	63-66	66-69	63-66	66-69	63-66	66-69	66-69		
Dual Pull	X	X	X	X	X	X	X	-		
Multi Clamp Band	X	X	X	X	X	X	X	-		
Offset Adjust Bolt	-	-	-	-	-	-	-	-		
28.6mm	Cable route	Top	X	X	X	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X
		Down	X	X	X	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X (w/AdapterS)	X
31.8mm	Cable route	Top	X	X	X	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X
		Down	X	X	X	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X (w/AdapterM)	X
34.9mm	Cable route	Top	X	-	X	X	X	X	X	X*
		Down	X	-	X	X	X	X	X	-
Front Clamp Band	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	
Rear Clamp Band	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	
BB Plate	Material	-	-	-	-	-	-	-	-	
Outer Link	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	
Inner Link	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted	Zinc Plated	
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Zinc Plated / Painted	Zinc Plated / Painted	Zinc Plated / Painted	Zinc Plated / Painted	Zinc Plated	
Note										

# Front Derailleur (MTB) Specifications

Series	TZ	TZ	TZ	TZ		
Model No.	FD-TZ30	FD-TZ31	FD-TZ20	FD-TZ21		
Rear Speeds	7/6	7/6	7/6	7/6		
Front SIS	-	-	-	-		
Chain Ring	Triple	Triple	Triple	Triple		
Top Swing Link	-	-	-	-		
E-type BB Mount	-	-	-	-		
Direct mount	-	-	-	-		
Applicable Chain Line	47.5mm	47.5mm	47.5mm	47.5mm		
Top Gear Teeth	42T	48T	42T	48T		
Total Capacity	18T	20T	18T	20T		
Top-Middle Capacity	8T	10T	8T	10T		
Chainstay Angle (degree)	66-69	66-69	66-69	66-69		
Dual Pull	-	-	-	-		
Multi Clamp Band	-	-	-	-		
Offset Adjust Bolt	-	-	-	-		
28.6mm	Cable route	Top	X	X	X	X
		Down	X	X	X	X
31.8mm	Cable route	Top	X	X	X	X
		Down	X	X	X	X
34.9mm	Cable route	Top	-	-	-	-
		Down	-	-	-	-
Front Clamp Band	Material	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	
Rear Clamp Band	Material	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	
BB Plate	Material	-	-	-	-	
Outer Link	Material	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	
Inner Link	Material	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	
Chain Guide	Material	Steel	Steel	Steel	Steel	
	Finish	Painted	Painted	Painted	Painted	
Note						



## Shift Lever (MTB) Specifications

Series	XTR	XTR	XTR	SAINT	Deore XT	Deore XT
Model No.	ST-M970	ST-M975	SL-M970A	SL-M810	ST-M775	ST-M770
Lever Type	Dual Control	Dual Control	Rapidfire Plus	Rapidfire Plus	Dual Control	Dual Control
Front	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS
Rear	9-speed SIS	9-speed SIS	9-speed SIS	9-speed SIS	9-speed SIS	9-speed SIS
Multi Release	X	X	X	-	X	X
Instant Release	X	X	X	X	X	X
2-Way Release	-	-	X	X	-	-
SL Cable Adjust	X	X	X (alloy)	X (alloy)	X	X
Optical Gear Display	-	-	-	-	-	X
Multi-Bearing Construction	R:3 L:3	R:1 L:2	R:4 L:4	R:2 L:2	R:1 L:3	R:1 L:3
SL Outer Casing	SP41 sealed	SP41 sealed	SP41 sealed	SP41 sealed	SP41 sealed	SP41 sealed
Stainless SL Cable	X	X	X	X	X	X
W/ CI-DECK	-	-	-	-	-	-
SL Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	-	-	-	Painted	Painted
SL Compatible RD Type	All 9-speed RD	All 9-speed RD	All 9-speed RD	All 9-speed RD	All 9-speed RD	All 9-speed RD
Note						

## Shift Lever (MTB) Specifications

Series	Deore XT	SLX	Deore LX	Deore LX	Deore	Deore
Model No.	SL-M770	SL-M660	ST-T660	SL-T660	ST-M590	SL-M590
Lever Type	Rapidfire Plus	Rapidfire Plus	Rapidfire Plus	Rapidfire Plus	Rapidfire Plus	Rapidfire Plus
Front	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS
Rear	9-speed SIS	9-speed SIS	9-speed SIS	9-speed SIS	9-speed SIS	9-speed SIS
Multi Release	-	-	-	-	-	-
Instant Release	X	-	-	-	-	-
2-Way Release	X	X	X	X	X	X
SL Cable Adjust	X	X	X	X	X	X
Optical Gear Display	X (removable)	X (removable)	X	X	X	X
Multi-Bearing Construction	R:2 L:2	R:- L:-	R: - L:-	R: - L:-	R: - L:-	R: - L:-
SL Outer Casing	SP41 sealed	SP41 sealed	SP41 sealed	SP41 sealed	SP41 sealed	SP41 sealed
Stainless SL Cable	X	X	X	X	X	X
W/ CI-DECK	-	-	-	-	-	-
SL Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
SL Compatible RD Type	All 9-speed RD	All 9-speed RD	All 9-speed RD	All 9-speed RD	All 9-speed RD	All 9-speed RD
Note						

## Shift Lever (MTB) Specifications

Series	Alivio	Alivio	Alivio	Alivio	Alivio	Acera
Model No.	ST-M410-L	ST-M410-NS	SL-M410	ST-M405	SL-MC40	ST-M360-L-2A
Lever Type	Rapidfire Plus	Rapidfire Plus	Rapidfire Plus	EZ-fire Plus	Rapidfire Plus	Rapidfire Plus
Front	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS
Rear	8-speed SIS	8-speed SIS	8-speed SIS	8-speed SIS	7-speed SIS	8-speed SIS
Multi Release	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-
SL Cable Adjust	X	X	X	X	X	X
Optical Gear Display	Slide type /Above handlebar	Slide type /Above handlebar	Slide type /Above handlebar	Slide type	Slide type /below handlebar	X
Multi-Bearing Construction	-	-	-	-	-	-
SL Outer Casing	SP40	SP40	SP40	SP40	SP40	SP40
Stainless SL Cable	Option	Option	Option	Option	Option	Option
W/ CI-DECK	-	-	-	-	-	-
SL Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Silver Painted
SL Compatible RD Type	Top Normal	Top Normal	Top Normal	Top Normal	Top Normal	Top Normal
Note	Black version	Neutral Silver version				Black version

## Shift Lever (MTB) Specifications

Series	Acera	Acera	Acera	Acera	Non-Series	Non-Series
Model No.	ST-M360-S-2A	ST-M360-L-4A	ST-M360-S-4A	SL-M360	ST-EF60-8R (SL) 4A	ST-EF60-7R (SL) 4A
Lever Type	Rapidfire Plus	Rapidfire Plus	Rapidfire Plus	Rapidfire Plus	EZ-fire Plus	EZ-fire Plus
Front	3-speed SIS	3-speed SIS	3-speed SIS	3-speed SIS	-	-
Rear	8-speed SIS	8-speed SIS	8-speed SIS	8-speed SIS	8 speed SIS	7 speed SIS
Multi Release	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-
SL Cable Adjust	X	X	X	X	X	X
Optical Gear Display	X	X	X	X	Slide type	Slide type
Multi-Bearing Construction	-	-	-	-	-	-
SL Outer Casing	SP40	SP40	SP40	SP40	SP40	SP40
Stainless SL Cable	Option	Option	Option	Option	Option	Option
W/ CI-DECK	-	-	-	-	-	-
SL Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
SL Compatible RD Type	Top Normal	Top Normal	Top Normal	Top Normal	Top Normal	Top Normal
Note	Silver version	Black version	Silver version		*Silver Version	*Silver Version

## Shift Lever (MTB) Specifications

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	ST-EF60-L (SL) 4A	ST-EF60-8R (SL) 2A	ST-EF60-7R (SL) 2A	ST-EF60-L (SL) 2A	ST-EF60-8R (LL) 4A	ST-EF60-7R (LL) 4A
Lever Type	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus
Front	3 speed SIS	-	-	3 speed SIS	-	-
Rear	-	8 speed SIS	7 speed SIS	-	8 speed SIS	7 speed SIS
Multi Release	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-
SL Cable Adjust	X	X	X	X	X	X
Optical Gear Display	Slide type	Slide type	Slide type	Slide type	Slide type	Slide type
Multi-Bearing Construction	-	-	-	-	-	-
SL Outer Casing	SP40	SP40	SP40	SP40	SP40	SP40
Stainless SL Cable	Option	Option	Option	Option	Option	Option
W/ CI-DECK	-	-	-	-	-	-
SL Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
SL Compatible RD Type	-	Top Normal	Top Normal	-	Top Normal	Top Normal
Note	*Silver Version	*Silver Version	*Silver Version	*Silver Version	*Black Version	*Black Version

## Shift Lever (MTB) Specifications

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	ST-EF60-L (LL) 4A	ST-EF60-8R (LL) 2A	ST-EF60-7R (LL) 2A	ST-EF60-L (LL) 2A	ST-EF50-7R(LL) 4A	ST-EF50-7R(SL) 4A
Lever Type	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus
Front	3 speed SIS	-	-	3 speed SIS	-	-
Rear	-	8 speed SIS	7 speed SIS	-	7-speed SIS	7-speed SIS
Multi Release	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-
SL Cable Adjust	X	X	X	X	-	-
Optical Gear Display	Slide type	Slide type	Slide type	Slide type	Dial type	Dial type
Multi-Bearing Construction	-	-	-	-	-	-
SL Outer Casing	SP40	SP40	SP40	SP40	SP40	SP40
Stainless SL Cable	Option	Option	Option	Option	-	-
W/ CI-DECK	-	-	-	-	-	-
SL Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
SL Compatible RD Type	-	Top Normal	Top Normal	-	Top Normal	Top Normal
Note	*Black Version	*Black Version	*Black Version	*Black Version	Black Version	Silver Version

## Shift Lever (MTB) Specifications

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	ST-EF50-L(LL) 4A	ST-EF50-L(SL) 4A	ST-EF50-8R(LL) 2A	ST-EF50-8R(SL) 2A	ST-EF50-7R(LL) 2A	ST-EF50-7R(SL) 2A	ST-EF50-L(LL) 2A
Lever Type	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus
Front	3-speed SIS	3-speed SIS	-	-	-	-	3-speed SIS
Rear	-	-	8-speed SIS	8-speed SIS	7-speed SIS	7-speed SIS	-
Multi Release	-	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-	-
SL Cable Adjust	X	X	-	-	-	-	X
Optical Gear Display	Dial type	Dial type	Dial type	Dial type	Dial type	Dial type	Dial type
Multi-Bearing Construction	-	-	-	-	-	-	-
SL Outer Casing	SP40	SP40	SP40	SP40	SP40	SP40	SP40
Stainless SL Cable	-	-	-	-	-	-	-
W/ CI-DECK	-	-	-	-	-	-	-
SL Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
SL Compatible RD Type	-	-	Top Normal	Top Normal	Top Normal	Top Normal	-
Note	Black Version	Silver Version	Black Version	Silver Version	Black Version	Silver Version	Black Version

## Shift Lever (MTB) Specifications

Series	Non-Series	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney
Model No.	ST-EF50-L(SL) 2A	ST-EF40-7R(LL) 2S	ST-EF40-6R(LL) 2S	ST-EF40-L(LL) 2S	SL-RS44-7R	SL-RS44-6R	SL-RS44-L
Lever Type	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	EZ-fire Plus	Revo Shift	Revo Shift	Revo Shift
Front	3-speed SIS	-	-	3-speed SIS	-	-	3-speed SIS
Rear	-	7-speed SIS	6-speed SIS	-	7-speed SIS	6-speed SIS	-
Multi Release	-	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-	-
SL Cable Adjust	X	-	-	X	X	X	X
Optical Gear Display	Dial type	Dial type	Dial type	Dial type	Window type with O.G.D light	Window type with O.G.D light	Window type with O.G.D light
Multi-Bearing Construction	-	-	-	-	-	-	-
SL Outer Casing	SP40	SIS	SIS	SIS	SIS40	SIS40	SIS40
Stainless SL Cable	-	-	-	-	-	-	-
W/ CI-DECK	-	-	-	-	Option	Option	Option
SL Bracket	Material	Aluminum	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
SL Compatible RD Type	-	Top Normal	Top Normal	-	Top Normal	Top Normal	-
Note	Silver Version	Black Version	Black Version	Black Version	with LED position light / for Japanese market only	with LED position light / for Japanese market only	with LED position light / for Japanese market only



## Shift Lever (MTB) Specifications

Series	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney
<b>Model No.</b>	SL-RS44-LN	SM-RS44-L	SL-RS43-8R	SL-RS43-7R	SL-RS43-6R	SL-RS43-L	SL-RS41A-8R	SL-RS41A-7R	SL-RS41A-L	SL-RS41-8R
<b>Lever Type</b>	Revo Shift	-	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Revo Shift
<b>Front</b>	Ratchet	-	-	-	-	3-speed SIS	-	-	3-speed SIS	-
<b>Rear</b>	-	-	8-speed SIS	7-speed SIS	6-speed SIS	-	8-speed SIS	7-speed SIS	-	8-speed SIS
<b>Multi Release</b>	-	-	-	-	-	-	-	-	-	-
<b>Instant Release</b>	-	-	-	-	-	-	-	-	-	-
<b>2-Way Release</b>	-	-	-	-	-	-	-	-	-	-
<b>SL Cable Adjust</b>	X	-	X	X	X	X	X	X	X	X
<b>Optical Gear Display</b>	Window type with O.G.D light	-	Window type	Window type	Window type	Window type	Window type	Window type	Window type	Revolving type
<b>Multi-Bearing Construction</b>	-	-	-	-	-	-	-	-	-	-
<b>SL Outer Casing</b>	SIS40	-	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40
<b>Stainless SL Cable</b>	-	-	-	-	-	-	-	-	-	-
<b>W/ CI-DECK</b>	Option	-	Option	Option	Option	Option	Option	Option	Option	Option
<b>SL Bracket</b>	<b>Material</b>	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	<b>Finish</b>	Painted	Painted	Painted	Painted	Painted	Painted	Painted	Painted	Painted
<b>SL Compatible RD Type</b>	-	-	Top Normal	Top Normal	Top Normal	-	Top Normal	Top Normal	-	Top Normal
<b>Note</b>	with LED position light / for Japanese market only	with LED position light / for Japanese market only								

## Shift Lever (MTB) Specifications

Series	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney
Model No.	SL-RS41-7R	SL-RS41-6R	SL-RS41-L	SL-RS35-7R	SL-RS35-6R	SL-RS35-L	SL-RS35-LN	SL-TX50-7R	SL-TX50-6R
Lever Type	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Revo Shift	Thumb Shifter Plus	Thumb Shifter Plus
Front	-	-	3-speed SIS	-	-	3-speed SIS	Ratchet	-	-
Rear	7-speed SIS	6-speed SIS	-	7-speed SIS	6-speed SIS	-	-	7-speed SIS	6-speed SIS
Multi Release	-	-	-	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-	-	-	-
SL Cable Adjust	X	X	X	-	-	X	X	-	-
Optical Gear Display	Revolving type	Revolving type	Revolving type	Revolving type	Revolving type	Revolving type	Revolving type	Window type	Window type
Multi-Bearing Construction	-	-	-	-	-	-	-	-	-
SL Outer Casing	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40
Stainless SL Cable	-	-	-	-	-	-	-	-	-
W/ CI-DECK	Option	Option	Option	Option	Option	Option	Option	-	-
SL Bracket	Material	Steel	Steel	Steel	Resin	Resin	Resin	Resin	Steel
	Finish	Painted	Painted	Painted	Resin	Resin	Resin	Resin	Painted
SL Compatible RD Type	Top Normal	Top Normal	-	Top Normal	Top Normal	-	-	Top Normal	Top Normal
Note									

## Shift Lever (MTB) Specifications

Series	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney
Model No.	SL-TX50-L	SL-TX50-LN	SL-TX30-7R	SL-TX30-6R	SL-TX30-LN	SL-TZ20-7R	SL-TZ20-6R	SL-TZ20-LN
Lever Type	Thumb Shifter	Thumb Shifter	Thumb Shifter Plus	Thumb Shifter Plus	Thumb Shifter Plus	Thumb Shifter	Thumb Shifter	Thumb Shifter
Front	3-speed SIS	Ratchet	-	-	Ratchet	-	-	Friction
Rear	-	-	7-speed SIS	6-speed SIS	-	7-speed SIS	6-speed SIS	-
Multi Release	-	-	-	-	-	-	-	-
Instant Release	-	-	-	-	-	-	-	-
2-Way Release	-	-	-	-	-	-	-	-
SL Cable Adjust	X	X	-	-	X	-	-	-
Optical Gear Display	Window type	Window type	Dial type	Dial type	Dial type	Dial type	Dial type	Dial type
Multi-Bearing Construction	-	-	-	-	-	-	-	-
SL Outer Casing	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40	SIS40
Stainless SL Cable	-	-	-	-	-	-	-	-
W/ CI-DECK	-	-	-	-	-	-	-	-
SL Bracket	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
SL Compatible RD Type	-	-	Top Normal	Top Normal	-	Top Normal	Top Normal	-
Note								

## Shift Lever (MTB) Specifications

<b>Series</b>	<b>Tourney</b>	
<b>Model No.</b>	<b>SL-TY18</b>	
<b>Lever Type</b>	Thumb Shifter	
<b>Front</b>	Friction	
<b>Rear</b>	6-speed SIS	
<b>Multi Release</b>	-	
<b>Instant Release</b>	-	
<b>2-Way Release</b>	-	
<b>SL Cable Adjust</b>	-	
<b>Optical Gear Display</b>	Dial type	
<b>Multi-Bearing Construction</b>	-	
<b>SL Outer Casing</b>	SIS40	
<b>Stainless SL Cable</b>	-	
<b>W/ CI-DECK</b>	-	
<b>SL Bracket</b>	<b>Material</b>	Steel
	<b>Finish</b>	Painted
<b>SL Compatible RD Type</b>	Top Normal	
<b>Note</b>		

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## Brake Lever (MTB) Specifications

Series	XTR	XTR	DXR	Deore XT	Deore XT	Deore XT	Deore LX	Deore LX	Deore LX
Model No.	ST-M970	BL-M970	BL-MX70	ST-M770	BL-M770	BL-M771	ST-T660	BL-T660	ST-M580
<b>Brake Type</b>	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake
<b>Lever Size</b>	1.5 finger	1.5 finger	2 finger	1.5 finger	1.5 finger	3 finger	3 finger	3 finger	1.5 finger
<b>Brake Cable Type</b>	W-type	W-type	T-type	W-type	W-type	W-type	T-type	T-type	T-type
<b>Power Adjuster</b>	X	X	-	X	X	-	-	-	-
<b>Servo-Wave Action</b>	X	X	-	X	X	-	-	-	-
<b>Reach Adjust</b>	X	X	X	X	X	X	X	X	X
<b>Cable Adjust</b>	X	X	X	X	X	X	X	X	X
<b>Brake Lever</b>	<b>Material</b>	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	<b>Finish</b>	Anodized	Anodized	Anodized	Painted	Painted	Painted	Anodized	Anodized
<b>Brake Bracket</b>	<b>Material</b>	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	<b>Finish</b>	Painted	Painted	Painted	Painted	Painted	Painted	Painted	Painted
<b>Note</b>			For BMX			Use w/Power Modulator	Use w/Power Modulator	Use w/Power Modulator	

## Brake Lever (MTB) Specifications

Series	Deore LX	Deore	Deore	Deore	Deore	Alivio	Alivio	Non-series
Model No.	BL-M571	BL-M591	ST-M590	BL-M590	ST-M530	ST-M410-L	ST-M410-NS	BL-M421
Brake Type	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake
Lever Size	1.5 finger	3 finger	3 finger	1.5 finger	1.5 finger	2 finger	2 finger	2 finger
Brake Cable Type	T-type	T-type	T-type	T-type	T-type	T-type	T-type	T-type
Power Adjuster	X	-	-	-	-	-	-	-
Servo-Wave Action	X	-	-	-	-	-	-	-
Reach Adjust	X	X	X	X	X	X	X	X
Cable Adjust	X	X	X	X	X	X	X	X
Brake Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Barrel
Brake Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	Painted
Note		Use w/Power Modulator	Use w/ Power Modulator			Black Version	Neutral Silver Version	Black Version, Silver Version

## Brake Lever (MTB) Specifications

Series		Alivio	Alivio	Acera	Acera	Acera
Model No.		ST-M405	ST-M405-4	ST-M360-L-2A	ST-M360-S-2A	ST-M360-L-4A
Brake Type		V-brake	HRB/Canti brake V-brake*	V-brake	V-brake	HRB/Canti brake V-brake*
Lever Size		2.5 finger	4 finger	2 finger	2 finger	4 finger
Brake Cable Type		T-type	T-type	T-type	T-type	T-type
Power Adjuster		-	-	-	-	-
Servo-Wave Action		-	-	-	-	-
Reach Adjust		X	X	X	X	X
Cable Adjust		X	X	X	X	X
Brake Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Anodized	Barrel	Anodized
Brake Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Note			*V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	Black Version	Silver version	Black Version, *V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible

## Brake Lever (MTB) Specifications

Series	Acera	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	ST-M360-S-4A	ST-EF60-7R (LL) 4A	ST-EF60-L (LL) 4A	ST-EF60-8R (LL) 2A	ST-EF60-7R (LL) 2A	ST-EF60-L (LL) 2A
Brake Type	HRB/Canti brake V-brake*	HRB/Canti brake V-brake*	HRB/Canti brake V-brake*	V-brake	V-brake	V-brake
Lever Size	4 finger	4 finger	4 finger	2 finger	2 finger	2 finger
Brake Cable Type	T-type	T-type	T-type	T-type	T-type	T-type
Power Adjuster	-	-	-	-	-	-
Servo-Wave Action	-	-	-	-	-	-
Reach Adjust	X	X	X	X	X	X
Cable Adjust	X	X	X	X	X	X
Brake Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel	Anodized	Anodized	Anodized	Anodized
Brake Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Note	Silver version, *V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	*Black Version *V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	*Black Version *V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible		*Black Version	*Black Version



# Brake Lever (MTB) Specifications

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	ST-EF50-8R(LL) 4A	ST-EF50-8R(SL) 4A	ST-EF50-7R(LL) 4A	ST-EF50-7R(SL) 4A	ST-EF50-L(LL) 4A	ST-EF50-L(SL) 4A
Brake Type	HRB/Canti brake V-brake*	HRB/Canti brake V-brake*	HRB/Canti brake V-brake*	HRB/Canti brake V-brake*	HRB/Canti brake V-brake*	HRB/Canti brake V-brake*
Lever Size	4 finger	4 finger	4 finger	4 finger	4 finger	4 finger
Brake Cable Type	T-type	T-type	T-type	T-type	T-type	T-type
Power Adjuster	-	-	-	-	-	-
Servo-Wave Action	-	-	-	-	-	-
Reach Adjust	X	X	X	X	X	X
Cable Adjust	X	X	X	X	X	X
Brake Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Barrel	Anodized	Barrel	Anodized
Brake Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Note	*Black Version *V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	*V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	*Black Version *V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	*V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	*Black Version *V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible	*V-brake and Mechanical Disc Brake must be used with power modulator. *INTER-M Compatible

## Brake Lever (MTB) Specifications

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	ST-EF50-8R(LL) 2A	ST-EF50-8R(SL) 2A	ST-EF50-7R(LL) 2A	ST-EF50-7R(SL) 2A	ST-EF50-L(LL) 2A	ST-EF50-L(SL) 2A
Brake Type	V-brake	V-brake	V-brake	V-brake	V-brake	V-brake
Lever Size	2 finger	2 finger	2 finger	2 finger	2 finger	2 finger
Brake Cable Type	T-type	T-type	T-type	T-type	T-type	T-type
Power Adjuster	-	-	-	-	-	-
Servo-Wave Action	-	-	-	-	-	-
Reach Adjust	X	X	X	X	X	X
Cable Adjust	X	X	X	X	X	X
Brake Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Barrel	Anodized	Barrel	Anodized
Brake Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Note	*Black Version		*Black Version		*Black Version	

## Brake Lever (MTB) Specifications

Series	Non-Series	Non-Series	Non-Series
Model No.	ST-EF40-7R(LL) 2S	ST-EF40-6R(LL) 2S	ST-EF40-L(LL) 2S
Brake Type	V-brake	V-brake	V-brake
Lever Size	2 finger	2 finger	2 finger
Brake Cable Type	T-type	T-type	T-type
Power Adjuster	-	-	-
Servo-Wave Action	-	-	-
Reach Adjust	X	X	X
Cable Adjust	-	-	X
Brake Lever	Material	Steel/Resin	Steel/Resin
	Finish	-	-
Brake Bracket	Material	Steel	Steel
	Finish	Painted	Painted
Note			

# Brake (MTB) Specifications

Series		XTR	DXR	Deore XT	Deore LX	Deore	Deore
Model No.		BR-M970	BR-MX70	BR-M770	BR-T660	BR-M590-L	BR-M590-S
Brake Type		V-brake	V-brake	V-brake	V-brake	V-brake	V-brake
Link Wire		-	-	-	-	-	-
Reinforced Link		X	-	-	-	-	-
Parallel Link		X	-	-	-	-	-
Power Modulator		-	-	-	-	-	-
Linear Spring		X	X	X	X	X	X
Threaded BR Shoe Post		X	X	X	X	X	X
Brake Shoe Type	Standard	M70R2	S70C	S70C/M70R2	S70C	S70C	S70C
	Optional Choice	Shoe for ceramic coated rim	M70T3 M70T4	Shoe for ceramic coated rim M70R2 M70T3 M70T4	M70T3 M70T4	M70T3 M70T4 S70T	M70T3 M70T4 S70T
Arch Size		103mm	103mm	103mm	107mm	107mm	107mm
Fixing Bolt Length		18/21.5/30.5mm	16mm	16/25mm	16/25mm	16/25mm	16/25mm
Sleeve & Bushing Type		X	X	X	X	X	X
Lead Pipe Angle		45/90/135	45/90/135	45/90/135	45/90/135	45/90/135	45/90/135
Canti Lever /N-arm /Caliper	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized + laser marking	Painted	Painted
Cartridge Shoe Holder		X	X	X	X	X	X
Note			For BMX rear only			Black Version	Silver Version

## Brake (MTB) Specifications

Series	Non Series	Non Series	Non-Series	Non-Series
Model No.	BR-M432-L	BR-M432-S	BR-M422-L	BR-M422-S
Brake Type	V-brake	V-brake	V-brake	V-brake
Link Wire	-	-	-	-
Reinforced Link	-	-	-	-
Parallel Link	-	-	-	-
Power Modulator	-	-	-	-
Linear Spring	X	X	X	X
Threaded BR Shoe Post	X	X	X	X
Brake Shoe Type	Standard	S70C	S70C	S65T
	Optional Choice	M70R2	M70R2	M65T3 M65T4
Arch Size	107mm	107mm	107mm	107mm
Fixing Bolt Length	16/25mm	16/25mm	16/25mm	16/25mm
Sleeve & Bushing Type	X	X	X	X
Lead Pipe Angle	45/90/135	45/90/135	45/90/135	45/90/135
Canti Lever /N-arm /Caliper	Material	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted
Cartridge Shoe Holder	X	X	-	-
Note	Black Version	Silver Version	Black Version	Silver Version

# Disc Brake (MTB) Specifications

## Brake Caliper

Series		XTR	XTR	SAINT	Deore XT	Deore XT
Model No.		BR-M975	BR-M975P	BR-M810	BR-M775	BR-M776
Brake Type		Disc-Brake	Disc-Brake	Disc-brake	Disc-brake	Disc-brake
Recommended Brake Lever		ST-M975 BL-M975	ST-M975 BL-M975	BL-M810	ST-M775 BL-M775	ST-M775 BL-M775
Recommended Brake Rotor		*SM-RT97	*SM-RT97	SM-RT79 SM-RT76	SM-RT79 SM-RT76	SM-RT79 SM-RT76
Hydraulic or Mechanical		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Oil		Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral
Mount Type (available for IS mount with mount adapter)		International standard	Post-type	Post-type	Post-type	Post-type
Piston	Opposed 2-piston	X	X	-	X	X
	Opposed 4-piston	-	-	X	-	-
Caliper	Mono-body Caliper	X	X	-	X	X
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Painted	Painted	Painted
PAD	Standard	M07Ti Resin	M07Ti Resin	D02S Metal	A01S Resin	A01S Resin
	Option	M06Ti Metal	M06Ti Metal	-	M06 Metal	M06 Metal
Hose		SM-BH59	SM-BH59	SM-BH80-SB	SM-BH59	SM-BH63
Note		*140mm for rear only				*for Banjo type joint

# Disc Brake (MTB) Specifications

## Brake Caliper

Series		SLX	Deore LX	Non-Series	Deore	Non-Series
Model No.		BR-M665	BR-T665	BR-T605	BR-M595	BR-M575
Brake Type		Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake
Recommended Brake Lever		BL-M665	BL-T665	BL-T605	BL-M595	BL-M575
Recommended Brake Rotor		SM-RT64	SM-RT64	SM-RT64	SM-RT62	*SM-RT53 SM-RT62
Hydraulic or Mechanical		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Oil		Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral
Mount Type (available for IS mount with mount adapter)		Post-type	Post-type	Post-type	Post-type	Post-type
Piston	Opposed 2-piston	X	X	X	X	X
	Opposed 4-piston	-	-	-	-	-
Caliper	Mono-body Caliper	-	-	-	-	-
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
PAD	Standard	A01S Resin	A01S Resin	A01S Resin	A01S Resin	B01S Resin
	Option	M06 Metal	M06 Metal	M06 Metal	M06 Metal	E01S Metal
Hose		SM-BH59	SM-BH59	SM-BH59	SM-BH59	SM-BH59
Note			Deore LX Logo	Shimano Logo	1 way oil routing	*For resin pad only Shimano Logo

# Disc Brake (MTB) Specifications

## Brake Caliper

<b>Series</b>		<b>Non-Series</b>	<b>Non-Series</b>	<b>Non-Series</b>	<b>Non-Series</b>	<b>Non-Series</b>
<b>Model No.</b>		<b>BR-R505</b>	<b>BR-M495</b>	<b>BR-M486</b>	<b>BR-M416-L</b>	<b>BR-M416-S</b>
<b>Brake Type</b>		Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake
<b>Recommended Brake Lever</b>		For Road ST* BL-R770/R550	V-brake BL (1.5-2.5 finger)	BL-M486	V-brake BL (1.5-2.5 finger)	V-brake BL (1.5-2.5 finger)
<b>Recommended Brake Rotor</b>		SM-RT62	SM-RT53 SM-RT51	SM-RT53 SM-RT51	SM-RT53 SM-RT51	SM-RT53 SM-RT51
<b>Hydraulic or Mechanical</b>		Mechanical	Mechanical	Hydraulic	Mechanical	Mechanical
<b>Oil</b>		-	-	Shimano Mineral	-	-
<b>Mount Type (available for IS mount with mount adapter)</b>		Post-type	Post-type	Post-type	Post-type	Post-type
<b>Piston</b>	<b>Opposed 2-piston</b>	-	-	X	-	-
	<b>Opposed 4-piston</b>	-	-	-	-	-
<b>Caliper</b>	<b>Mono-body Caliper</b>	-	-	-	-	-
	<b>Material</b>	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	<b>Finish</b>	Painted	Painted	Painted	Painted(black)	Painted(Silver)
<b>PAD</b>	<b>Standard</b>	M06 Metal	M08 Resin	B01S Resin	B01S Resin	B01S Resin
	<b>Option</b>	-	-	-	-	-
<b>Hose</b>		Cable	Cable	SM-BH59	Cable	Cable
<b>Note</b>		not compatible with ST-7900 *Refer from P107		Shimano Logo	black color / Shimano Logo	Silver color / Shimano Logo



# Disc Brake (MTB) Specifications

## Brake Lever

Series	XTR	XTR	SAINT	Deore XT	Deore XT	SLX
Model No.	ST-M975	BL-M975A	BL-M810	ST-M775	BL-M775A	BL-M665
Brake Type	Hydraulic Disc-brake	Hydraulic Disc-brake	Hydraulic Disc-brake	Hydraulic Disc-brake	Hydraulic Disc-brake	Hydraulic Disc-brake
Servo wave mechanism	-	-	X	X	X	X
Recommended Brake Caliper	BR-M975/975P	BR-M975/975P	BR-M810	BR-M775	BR-M775	BR-M665
Oil	Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral
Master Cylinder	X	X	X	X	X	X
Lever Size	1.5 finger	1.5 finger	1.5 finger	1.5 finger	1.5 finger	1.5 finger
Reach Adjust	X	-	Tool free	Tool free	Tool free	Tool free
Brake Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized
Brake Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Brake Hose	SM-BH59	SM-BH59	SM-BH80-SB	SM-BH59	SM-BH59	SM-BH59
Note			Free stroke adjuster	Free stroke adjuster	Free stroke adjuster	

# Disc Brake (MTB) Specifications

## Brake Lever

Series	Deore LX	Non-Series	Deore	Non-Series	Non-Series
Model No.	BL-T665	BL-T605	BL-M595	BL-M575	BL-M486
Brake Type	Hydraulic Disc-brake	Hydraulic Disc-brake	Hydraulic Disc-brake	Hydraulic Disc-brake	Hydraulic Disc-brake
Servo wave mechanism	X	-	-	-	-
Recommended Brake Caliper	BR-T665	BR-T605	BR-M595	BR-M575	BR-M486 (only)
Oil	Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral	Shimano Mineral
Master Cylinder	X	X	X	X	X
Lever Size	3 finger	4 finger	1.5 finger	1.5 finger	2 finger
Reach Adjust	X	X	Tool free	X	X
Brake Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized
Brake Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted
Brake Hose	SM-BH59	SM-BH59	SM-BH59	SM-BH59	SM-BH59
Note	Deore LX Logo	Shimano Logo	1 bolt type open clamp band	Shimano Logo, flip flop type BL with open clamp band	Shimano Logo

# Disc Brake (MTB) Specifications

## Brake Rotor

Series		XTR	XTR	XTR	XTR	SAINT/ Deore XT	SAINT/ Deore XT	SAINT/ Deore XT	Deore XT
<b>Model No.</b>		SM-RT97L	SM-RT97M	SM-RT97	SM-RT97SS	SM-RT79L	SM-RT79M	SM-RT79	SM-RT76
<b>Brake Type</b>		Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake
<b>Outside Diameter</b>	<b>203mm</b>	X				X			
	<b>180mm</b>		X				X		
	<b>160mm</b>			X				X	X
	<b>140mm</b>				X				
<b>Center Lock (standard size)</b>		X	X	X	X	X	X	X	-
<b>6bolt (PCD 44mm)</b>		-	-	-	-	-	-	-	X
<b>Alloy lock ring</b>		X	X	X	X	X	X	X	-
<b>Adapter</b>	<b>Material</b>	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	<b>Finish</b>	Anodized/ Polished	Anodized/ Polished	Anodized/ Polished	Anodized/ Polished	Painted	Painted	Painted	Painted
<b>Rotor</b>	<b>Material</b>	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	<b>Finish</b>	Polished	Polished	Polished	Polished	Polished	Polished	Polished	Polished
<b>Note</b>		Check Suspension manufacturer for compatibility			For Rear Only	Check Suspension manufacturer for compatibility			

# Disc Brake (MTB) Specifications

## Brake Rotor

Series		Deore XT	Deore XT	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	SLX
Model No.		SM-RT76M	SM-RT76L	SM-RT80	SM-RT80S	SM-RT75S	SM-RT75MA	SM-RT75-DH	SM-RT64L
Brake Type		Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake
Outside Diameter	203mm		X	X				X	X
	180mm	X					X		
	160mm				X	X			
	140mm								
Center Lock (standard size)		-	-	(Oversized)	(Oversized)	-	-	-	X
6bolt (PCD 44mm)		X	X	-	-	X	X	X	-
Alloy lock ring		-	-	X	X	-	-	-	-
Adapter	Material	Aluminum	Aluminum	Aluminum	Aluminum	-	-	-	Aluminum
	Finish	Painted	Painted	Anodized	Anodized	-	-	-	Painted
Rotor	Material	Stainless Steel	Stainless Steel	Stainless Steel/ Aluminum	Stainless Steel/ Aluminum	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Finish	Polished	Polished	Polished/ Anodized	Polished/ Anodized	Polished	Polished	Polished	Polished
Note								Check Suspension manufacturer for compatibility	Check Suspension manufacturer for compatibility

# Disc Brake (MTB) Specifications

## Brake Rotor

Series		SLX	SLX	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
<b>Model No.</b>		<b>SM-RT64M</b>	<b>SM-RT64</b>	<b>SM-RT62</b>	<b>SM-RT62M</b>	<b>SM-RT62L</b>	<b>SM-RT53</b>	<b>SM-RT53M</b>
<b>Brake Type</b>		Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake	Disc-brake
<b>Outside Diameter</b>	<b>203mm</b>					X		
	<b>180mm</b>	X			X			X
	<b>160mm</b>		X	X			X	
	<b>140mm</b>							
<b>Center Lock (standard size)</b>		X	X	X	X	X	X	X
<b>6bolt (PCD 44mm)</b>		-	-	-	-	-	-	-
<b>Alloy lock ring</b>		-	-	-	-	-	-	-
<b>Adapter</b>	<b>Material</b>	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	<b>Finish</b>	Painted	Painted	Painted	Painted	Painted	Painted	Painted
<b>Rotor</b>	<b>Material</b>	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	<b>Finish</b>	Polished	Polished	Polished	Polished	Polished	Polished	Polished
<b>Note</b>						Check Suspension manufacturer for compatibility	For Resin Pad Only	For Resin Pad Only

# Disc Brake (MTB) Specifications

## Brake Rotor

Series		Non-Series	Non-Series	Non-Series
Model No.		SM-RT53L	SM-RT51	SM-RT51-M
Brake Type		Disc-brake	Disc-brake	Disc-brake
Outside Diameter	203mm	X		
	180mm			X
	160mm		X	
	140mm			
Center Lock (standard size)		X	-	-
6bolt (PCD 44mm)		-	X	X
Alloy lock ring		-	-	-
Adapter	Material	Aluminum	-	-
	Finish	Painted	-	-
Rotor	Material	Stainless Steel	Stainless Steel	Stainless Steel
	Finish	Polished	Polished	Polished
Note		For Resin Pad Only, Check Suspension manufacturer for compatibility	For Resin Pad Only	For Resin Pad Only

# Hub Roller Brake Specifications

Series	NEXUS		NEXAVE	NEXAVE		NEXUS		NEXUS		Non-Series		NEXUS	
Model No.	BR-IM80		BR-IM75	BR-IM70		BR-IM50		BR-IM41		BR-IM35		BR-IM31	
	Front	Rear	Front	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear
Hub dynamo integration	-	-	-	-	-	-	-	-	-	-	-	-	-
Structure	Hyper	Hyper	Hyper	Hyper	Hyper	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Braking Power( *1 )	1.5	1.5	1.3	1.3	1.3	1	1	1	1	1	1	1	1
Cooling Fin Diameter	150mm	150mm	150mm	150mm	150mm	130mm	130mm	90mm	100mm	160mm	160mm	90mm	90mm
Heat Dissipation ( *1 )	1.4	1.4	2.2	2.2	2.2	1.2	1.2	1	1	1.2	1.2	1	Less than 1
Without Cooling Fin	-	-	-	-	-	-	-	-	-	-	-	Available	Available
Inner Cable Quick Release	X	X	X	X	X	X	X	X	X	-	-	-	-
Disc Brake Mount Compatible	-	-	X	-	-	-	-	-	-	-	-	-	-
Note													








Performance index rating uses BR-IM41 brake unit as a reference value of 1. Testing condition ,

## Power Modulator (MTB) Specifications







Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	SM-PM70	SM-PM60	SM-PM50	SM-PM40
Available Lead Pipe Angle	90°/ 135°	-	-	90°/ 135°
Body Material	Aluminum	Aluminum	Aluminum	Aluminum
Body Finish	Anodized + laser marking	Barrel and Sticker	Barrel and Printed	Barrel and Sticker
Lead Pipe Material	Stainless Steel	-	-	Stainless Steel
Compatible Brake	Any Shimano V-brake without power modulator	Any Shimano V-brake (Except:BRT400/T300)	Any Shimano Mechanical Disc Brake	Any Shimano V-brake without power modulator
Compatible BL	Any Shimano V-brake Lever without power modulator	Any Shimano V-brake Lever (Except:BL-C900/C600)	Any Shimano V-brake Lever without power modulator	Any Shimano V-brake Lever without power modulator
Note		Black Version	Silver Version	Black, Red or Blue Version



# Front Chainwheel (MTB) Specifications

Series	XTR	SAINT	SAINT	SAINT	SAINT	DXR	Deore XT
Model No.	FC-M970	FC-M815-2	FC-M815-1	FC-M810-2	FC-M810-1	FC-MX70	FC-M770
Rear Speeds	9	9	9	9	9	1	9
Chaining Combination	44-32-22T/ 44-32-24T	36-22T	34/36/38/40/42T	36-22T	34/36/38/40/42T	34/38/41/42/43/44/46T	44-32-22T
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	104/64mm	104/64mm	104/64mm	104/64mm	104/64mm	104/64mm	104/64mm
Crank Arm Length	160mm	-	-	-	-	-	-
	165mm	X	X	X	X	X	X
	167.5mm	X	-	-	-	-	-
	170mm	X	X	X	X	X	X
	172.5mm	X	-	-	-	-	-
	175mm	X	X	X	X	X	X
	177.5mm	X	-	-	-	-	-
	180mm	X	-	-	-	-	X
Chain	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	1/2" x 3/32"	Super Narrow HG for 9-speed
Bottom Bracket (*press fit type option is available)	SM-BB90*	SM-BB80	SM-BB80	SM-BB80	SM-BB80	Included	SM-BB70*
Axle Length	Chain Line 47.5	-	-	-	-	-	-
	Chain Line 50	X	Chain Line 54.3	Chain Line 57.9	Chain Line 46.8	Chain Line 50.4	Chain Line 44
	Chain Line 47.5+t	-	-	-	-	-	-
With Crank Fixing Bolt	X	X	X	X	X	X	-
Fixing Nut Type BB compatible	-	-	-	-	-	-	-
Optional Chain Guard	-	Bash guard	Bash guard	Bash guard	Bash guard	-	-
Hollowtech II technology	X 	X 	X 	X 	X 	X 	X 
2-piece crank construction	X	X	X	X	X	X	X
Hollowtech Crank Arm	X	X	X	X	X	X	X
OCTALINK technology	-	-	-	-	-	-	-
One-key Release	-	-	-	-	-	-	-
Chain Case Compatible Crank	-	-	-	-	-	-	-
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
Spider Arm	Material	-	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	-	Painted	Painted	Painted	Painted	Painted
Spider Arm Cover	Material	-	-	-	-	-	-
	Finish	-	-	-	-	-	-
Outer Ring	Material	Aluminum	-	-	-	-	Aluminum
	Finish	Painted/Plated	-	-	-	-	Anodized
Middle Ring	Material	Titanium/Carbon composite	Aluminum	Aluminum	Aluminum	Aluminum	-
	Finish	Shot Blasting	Plated	Anodized	Plated	Anodized	-
Inner Ring	Material	Aluminum	Aluminum	-	Aluminum	-	Aluminum
	Finish	Plated	Plated	-	Plated	-	Plated
Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)		Double chain rings 83mm BB shell width	Single chain ring 83mm BB shell width	Double chain rings 68/73mm BB shell width	Single chain ring 68/73mm BB shell width	BMX racing 68mm BB shell width	



# Front Chainwheel (MTB) Specifications

Series	Deore XT	SLX	SLX	SLX	Deore LX	Deore LX	Deore
Model No.	FC-M771-K	FC-M660	FC-M660	FC-M665	FC-T661	FC-T661	FC-M591
Rear Speeds	9	9	9	9	9	9	9
Chaining Combination	48-36-26T	44-32-22T	48-36-26T	36-22T	44-32-22T	48-36-26T	44-32-22T/48-36-26T
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	104/64mm	104/64mm	104/64mm	104/64mm	104/64mm	104/64mm	104/64mm
Crank Arm Length	160mm	-	-	-	-	-	-
	165mm	X	-	-	-	-	-
	167.5mm	-	-	-	-	-	-
	170mm	X	X	X	X	X	X
	172.5mm	-	-	-	-	-	-
	175mm	X	X	X	X	X	X
	177.5mm	-	-	-	-	-	-
	180mm	X	-	-	-	-	-
Chain	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed
Bottom Bracket (*press fit type option is available)	SM-BB70	SM-BB70*	SM-BB70*	SM-BB70*	SM-BB70	SM-BB70	SM-BB51
Axle Length	Chain Line 47.5	-	-	-	-	-	-
	Chain Line 50	X	X	X	Chain line 46.8mm**	X	X
	Chain Line 47.5+t	-	-	-	-	-	-
With Crank Fixing Bolt	-	-	-	-	-	-	
Fixing Nut Type BB compatible	-	-	-	-	-	-	
Optional Chain Guard	X	-	X	Bash guard	X	X	X
Hollowtech II technology	X 	X 	X 	X 	X 	X 	-
2-piece crank construction	X	X	X	X	X	X	X
Hollowtech Crank Arm	X	X	X	X	X	X	-
OCTALINK technology	-	-	-	-	-	-	-
One-key Release	-	-	-	-	-	-	-
Chain Case Compatible Crank	X	-	-	-	X	X	X
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Painted	Painted
Spider Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	-	-
	Finish	Painted	Painted	Painted	Painted	-	-
Spider Arm Cover	Material	-	-	-	-	-	-
	Finish	-	-	-	-	-	-
Outer Ring	Material	Aluminum	Aluminum	Aluminum	-	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	-	Anodized	Anodized
Middle Ring	Material	Aluminum	Steel/GF composite	Aluminum	Aluminum	Steel/GF composite	Aluminum
	Finish	Plated	Plated	Plated	Plated	Plated	Plated
Inner Ring	Material	Aluminum	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Painted	Painted	Painted	Painted	Painted
Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)				**36T and 22T position are same as FC-M660 (triple)	4 arm integrated crank arm	4 arm integrated crank arm	

# Front Chainwheel (MTB) Specifications

Series	Deore	Shimano	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	FC-M590	FC-M545	FC-M543-LK	FC-M543-SK	FC-M542-L	FC-M542-S
Rear Speeds	9	9	9	9	9	9
Chaining Combination	44-32-22T/48-36-26T	36-22T	44-32-22T 48-36-26T	44-32-22T 48-36-26T	44-32-22T	44-32-22T
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	104/64mm	104/64mm	104/64	104/64	104/64	104/64
Crank Arm Length	160mm	-	-	-	-	-
	165mm	-	-	-	-	-
	167.5mm	-	-	-	-	-
	170mm	X	X	X	X	X
	172.5mm	-	-	-	-	-
	175mm	X	X	X	X	X
	177.5mm	-	-	-	-	-
	180mm	-	-	-	-	-
Chain	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed
Bottom Bracket (*press fit type option is available)	SM-BB51*	SM-BB50	SM-BB50	SM-BB50	SM-BB50*	SM-BB50*
Axle Length	Chain Line 47.5	-	-	-	-	-
	Chain Line 50	X	Chain line 46.8mm**	X	X	X
	Chain Line 47.5+t	-	-	-	-	-
With Crank Fixing Bolt	-	-	-	-	-	-
Fixing Nut Type BB compatible	-	-	-	-	-	-
Optional Chain Guard	X	Bash guard	X	X	X	X
Hollowtech II technology	-	-	-	-	-	-
2-piece crank construction	X	X	X	X	X	X
Hollowtech Crank Arm	-	-	-	-	-	-
OCTALINK technology	-	-	-	-	-	-
One-key Release	-	-	-	-	-	-
Chain Case Compatible Crank	-	-	X	X	-	-
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Spider Arm	Material	-	-	-	-	-
	Finish	-	-	-	-	-
Spider Arm Cover	Material	-	-	-	-	-
	Finish	-	-	-	-	-
Outer Ring	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	-	Twice Anodized	Twice Anodized	Twice Anodized
Middle Ring	Material	Steel	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Plated	Plated	Plated	Plated
Inner Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Plated	Plated	Plated	Plated
Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)		**36T and 22T position are same as FC-M660 (triple)	Black Version Shimano logo	Silver Version Shimano logo	Black Version Shimano logo	Silver Version Shimano logo

# Front Chainwheel (MTB) Specifications

Series	Non Series	Non Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	FC-M521-L	FC-M521-S	FC-M443-L	FC-M443-S	FC-M443-8-L	FC-M443-8-S	FC-M443-L
Rear Speeds	9	9	9	9	9	9	9
Chaining Combination	44-32-22T/ 48-36-26T	44-32-22T/ 48-36-26T	44-32-22T	44-32-22T	44-32-22T	44-32-22T	48-36-26T
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	104/64	104/64	104/64	104/64	104/64	104/64	104/64
Crank Arm Length	160mm	-	-	-	-	-	-
	165mm	-	-	-	-	-	-
	167.5mm	-	-	-	-	-	-
	170mm	X	X	X	X	X	X
	172.5mm	-	-	-	-	-	-
	175mm	X	X	X	X	X	X
	177.5mm	-	-	-	-	-	-
	180mm	-	-	-	-	-	-
Chain	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed
Bottom Bracket (*press fit type option is available)	BB-ES25-AK / BB-ES25-E	BB-ES25-AK / BB-ES25-E	BB-UN26(-K)	BB-UN26(-K)	BB-ES25(-K)	BB-ES25(-K)	BB-UN26(-K)
Axle Length	Chain Line 47.5	-	-	117.5	117.5	121	117.5
	Chain Line 50	121AK / 121E*	121AK / 121E*	LL123	LL123	126	LL123
	Chain Line 47.5+t	-	-	117.5K	117.5K	121K	117.5K
With Crank Fixing Bolt	X	X	X	X	X	X	
Fixing Nut Type BB compatible	-	-	-	-	-	-	
Optional Chain Guard	X	X	X	X	X	X	
Hollowtech II technology	-	-	-	-	-	-	
2-piece crank construction	-	-	-	-	-	-	
Hollowtech Crank Arm	X 	X 	-	-	-	-	
OCTALINK technology	X	X	-	-	X	X	
One-key Release	-	-	-	-	-	-	
Chain Case Compatible Crank	X	X	X	X	X	X	
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Spider Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Spider Arm Cover	Material	-	-	-	-	-	-
	Finish	-	-	-	-	-	-
Outer Ring	Material	Aluminum	Aluminum	Steel	Steel	Steel	Aluminum
	Finish	Anodized	Anodized	Painted	Painted	Painted	Anodized
Middle Ring	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright
Inner Ring	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright
<b>Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)</b>	Black Version, * In case of no chain case used, 68mm shell width: 121 also can be used, 73mm BB shell width : 121 must be used	Silver Version, * In case of no chain case used, 68mm shell width: 121 also can be used, 73mm BB shell width : 121 must be used	Black Version For chaincase Steel chainrings	Silver Version For chaincase Steel chainrings	Black Version For chain case Steel chainrings Octalink	Silver Version For chaincase Steel chainrings Octalink	Black Version For chain case Aluminum 48T chainrig

# Front Chainwheel (MTB) Specifications

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	
Model No.	FC-M443-S	FC-M443-8-L	FC-M443-8-S	FC-M442-L	FC-M442-L	FC-M442-S	FC-M442-8-L	
Rear Speeds	9	9	9	9	9	9	9	
Chaining Combination	48-36-26T	48-36-26T	48-36-26T	44-32-22T	44-32-22T	44-32-22T	44-32-22T	
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm	4arm	
PCD (mm)	104/64	104/64	104/64	104/64	104/64	104/64	104/64	
Crank Arm Length	160mm	-	-	-	-	-	-	
	165mm	-	-	-	-	-	-	
	167.5mm	-	-	-	-	-	-	
	170mm	X	X	X	X	X	X	
	172.5mm	-	-	-	-	-	-	
	175mm	X	X	X	X	X	X	
	177.5mm	-	-	-	-	-	-	
	180mm	-	-	-	-	-	-	
Chain	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	
Bottom Bracket (*press fit type option is available)	BB-UN26(-K)	BB-ES25(-K)	BB-ES25(-K)	BB-UN26(-E)	BB-UN26(-E)	BB-UN26(-E)	BB-ES25(-E)	
Axle Length	Chain Line 47.5	117.5	121	121	MM110(E)	MM110(E)	MM110(E)	113(E)
	Chain Line 50	LL123	126	126	LL113(E)	LL113(E)	LL113(E)	118(E)
	Chain Line 47.5+t	117.5K	121K	121K	-	-	-	-
With Crank Fixing Bolt	X	X	X	X	X	X	X	
Fixing Nut Type BB compatible	-	-	-	-	-	-	-	
Optional Chain Guard	X	-	X	X	X	X	X	
Hollowtech II technology	-	-	-	-	-	-	-	
2-piece crank construction	-	-	-	-	-	-	-	
Hollowtech Crank Arm	-	-	-	-	-	-	-	
OCTALINK technology	-	X	X	-	-	-	X	
One-key Release	-	-	-	-	-	-	-	
Chain Case Compatible Crank	X	X	X	-	-	-	-	
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
Spider Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Painted	Painted	Painted	Painted	Painted	Painted	
Spider Arm Cover	Material	-	-	-	-	-	-	
	Finish	-	-	-	-	-	-	
Outer Ring	Material	Aluminum	Aluminum	Aluminum	Aluminum	Steel	Steel	
	Finish	Anodized	Anodized	Anodized	Painted	Painted	Painted	
Middle Ring	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	
Inner Ring	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	
<b>Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)</b>	Silver Version For chaincase Aluminum 48T chainrig	Black Version For chaincase Aluminum 48T chainrig Octalink	Silver Version For chaincase Aluminum 48T chainrig Octalink	Black Version Aluminum 44T chainring	Black Version Steel chainrings	Silver Version Steel chainrings	Black Version Steel chainrings Octalink	

# Front Chainwheel (MTB) Specifications

Series	Non-Series	Alivio	Alivio	Alivio	Alivio	Alivio
Model No.	FC-M442-8-S	FC-M411-L	FC-M411-S	FC-M411-L	FC-M411-S	FC-M410-L
Rear Speeds	9	8/7	8/7	8/7	8/7	8/7
Chaining Combination	44-32-22T	48-38-28T	48-38-28T	42-32-22T	42-32-22T	42-32-22T
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	104/64	104/64	104/64	104/64	104/64	104/64
Crank Arm Length	160mm	-	-	-	-	-
	165mm	-	-	-	-	-
	167.5mm	-	-	-	-	-
	170mm	X	X	X	X	X
	172.5mm	-	-	-	-	-
	175mm	X	X	X	X	X
	177.5mm	-	-	-	-	-
	180mm	-	-	-	-	-
Chain	Super Narrow HG for 9-speed	HG	HG	HG	HG	HG
Bottom Bracket (*press fit type option is available)	BB-ES25(-E)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-E)
Axle Length	Chain Line 47.5	113(E)	-	-	-	-
	Chain Line 50	118(E)	LL123(K)	LL123(K)	LL123(K)	LL113(E)
	Chain Line 47.5+t	-	-	-	-	-
With Crank Fixing Bolt	X	X	X	X	X	X
Fixing Nut Type BB compatible	-	-	-	-	-	-
Optional Chain Guard	X	X	X	X	X	X
Hollowtech II technology	-	-	-	-	-	-
2-piece crank construction	-	-	-	-	-	-
Hollowtech Crank Arm	-	-	-	-	-	-
OCTALINK technology	X	-	-	-	-	-
One-key Release	-	-	-	-	-	-
Chain Case Compatible Crank	-	X	X	X	X	-
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Spider Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Spider Arm Cover	Material	-	-	-	-	-
	Finish	-	-	-	-	-
Outer Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted
Middle Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Pearl Bright	Plated	Plated	Plated	Plated
Inner Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Pearl Bright	Plated	Plated	Plated	Plated
<b>Important notice; If using a chaincase, select a BB-0000(K). If using an E-type FD, select a BB-0000(E)</b>	Silver Version Steel chainrings Octalink	Black Version For chaincase t=1.8mm	Neutral Silver Version For chaincase t=1.8mm	Black Version For chaincase t=1.8mm	Neutral Silver Version For chaincase t=1.8mm	Black Version

# Front Chainwheel (MTB) Specifications

Series	Alivio	Alivio	Alivio	Acera	Acera	Acera
Model No.	FC-M410-S	FC-M410-8-L	FC-M410-8-S	FC-M361-L	FC-M361-S	FC-M361-L
Rear Speeds	8/7	8/7	8/7	8/7	8/7	8/7
Chaining Combination	42-32-22T	42-32-22T	42-32-22T	42-32-22T	42-32-22T	48-38-28
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	104/64	104/64	104/64	104/64	104/64	104/64
Crank Arm Length	160mm	-	-	-	-	-
	165mm	-	-	-	-	-
	167.5mm	-	-	-	-	-
	170mm	X	X	X	X	X
	172.5mm	-	-	-	-	-
	175mm	X	X	X	X	X
	177.5mm	-	-	-	-	-
	180mm	-	-	-	-	-
Chain	HG	HG	HG	HG	HG	HG
Bottom Bracket (*press fit type option is available)	BB-UN26(-E)	BB-ES25(-E)	BB-ES25(-E)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-K)
Axle Length	Chain Line 47.5	-	-	-	-	-
	Chain Line 50	LL113(E)	118(E)	118(E)	LL123(K)	LL123(K)
	Chain Line 47.5+t	-	-	-	-	-
With Crank Fixing Bolt	X	X	X	X	X	X
Fixing Nut Type BB compatible	-	-	-	-	-	-
Optional Chain Guard	X	X	X	X	X	X
Hollowtech II technology	-	-	-	-	-	-
2-piece crank construction	-	-	-	-	-	-
Hollowtech Crank Arm	-	-	-	-	-	-
OCTALINK technology	-	X	X	-	-	-
One-key Release	-	-	-	-	-	-
Chain Case Compatible Crank	-	-	-	X	X	X
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted
Spider Arm	Material	Aluminum	Aluminum	Aluminum	-	-
	Finish	Painted	Painted	Painted	-	-
Spider Arm Cover	Material	-	-	-	-	-
	Finish	-	-	-	-	-
Outer Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted
Middle Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Plated	Painted	Painted
Inner Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Plated	Painted	Painted
Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)	Neutral Silver Version	Black Version Octalink	Neutral Silver Version Octalink	Black Version	Silver Version	Black Version

# Front Chainwheel (MTB) Specifications

Series	Acera	Acera	Acera	Altus	Altus	Altus	Altus
Model No.	FC-M361-S	FC-M361-8-L	FC-M361-8-S	FC-M311-L	FC-M311-S	FC-M311-L	FC-M311-S
Rear Speeds	8/7	8/7	8/7	8/7	8/7	8/7	8/7
Chaining Combination	48-38-28	42-32-22T	42-32-22T	42-32-22T	42-32-22T	48-38-28	48-38-28
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	104/64	104/64	104/64	Rivitted	Rivitted	Rivitted	Rivitted
Crank Arm Length	160mm	-	-	-	-	-	-
	165mm	-	-	-	-	-	-
	167.5mm	-	-	-	-	-	-
	170mm	X	X	X	X	X	X
	172.5mm	-	-	-	-	-	-
	175mm	X	X	X	X	X	X
	177.5mm	-	-	-	-	-	-
	180mm	-	-	-	-	-	-
Chain	HG	HG	HG	HG	HG	HG	HG
Bottom Bracket (*press fit type option is available)	BB-UN26(-K)	BB-ES25(-K)	BB-ES25(-K)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-K)
Axle Length	Chain Line 47.5	-	-	-	-	-	-
	Chain Line 50	LL123(K)	126(K)	126(K)	LL123(K)	LL123(K)	LL123(K)
	Chain Line 47.5+t	-	-	-	-	-	-
With Crank Fixing Bolt	X	X	X	X	X	X	X
Fixing Nut Type BB compatible	-	-	-	-	-	-	-
Optional Chain Guard	X	X	X	X	X	X	X
Hollowtech II technology	-	-	-	-	-	-	-
2-piece crank construction	-	-	-	-	-	-	-
Hollowtech Crank Arm	-	-	-	-	-	-	-
OCTALINK technology	-	X	X	-	-	-	-
One-key Release	-	-	-	-	-	-	-
Chain Case Compatible Crank	X	X	X	X	X	X	X
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Spider Arm	Material	-	-	-	-	-	-
	Finish	-	-	-	-	-	-
Spider Arm Cover	Material	-	-	-	Resin	Resin	Resin
	Finish	-	-	-	Resin	Resin	Resin
Outer Ring	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted	Painted
Middle Ring	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Plated	Plated	Plated
Inner Ring	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Plated	Plated	Plated
Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)	Silver Version	Black Version, Octalink	Silver Version, Octalink	Black Version	Silver Version	Black Version	Silver Version



# Front Chainwheel (MTB) Specifications

Series	Altus	Altus	Non series	Non series	Non series	Non series
Model No.	FC-M311-8-L	FC-M311-8-S	FC-M191	FC-M191	FC-M151	FC-M151
Rear Speeds	8/7	8/7	8/7/6	8/7/6	8/7/6	8/7/6
Chaining Combination	42-32-22T	42-32-22T	42-34-24T	48-38-28T	42-34-24T	48-38-28T
Spider or Gear Arm	4arm	4arm	4arm	4arm	4arm	4arm
PCD (mm)	Riveted	Riveted	Riveted	Riveted	Riveted	Riveted
Crank Arm Length	160mm	-	-	-	-	-
	165mm	-	-	-	-	-
	167.5mm	-	-	-	-	-
	170mm	X	X	X	X	X
	172.5mm	-	-	-	-	-
	175mm	X	X	-	-	-
	177.5mm	-	-	-	-	-
	180mm	-	-	-	-	-
Chain	HG	HG	HG/UG	HG/UG	HG/UG	HG/UG
Bottom Bracket (*press fit type option is available)	BB-ES25(-K)	BB-ES25(-K)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-K)	BB-UN26(-K)
Axle Length	Chain Line 47.5	-	-	D-NL	D-NL	D-NL
	Chain Line 50	126(K)	126(K)	-	-	-
	Chain Line 47.5+t	-	-	D-NL K	D-NL K	D-NL K
With Crank Fixing Bolt	X	X	-	-	-	-
Fixing Nut Type BB compatible	-	-	X	X	X	X
Optional Chain Guard	X	X	X	X	X	X
Hollowtech II technology	-	-	-	-	-	-
2-piece crank construction	-	-	-	-	-	-
Hollowtech Crank Arm	-	-	-	-	-	-
OCTALINK technology	X	X	-	-	-	-
One-key Release	-	-	-	-	-	-
Chain Case Compatible Crank	X	X	X	X	X	X
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	polished	polished	polished
Spider Arm	Material	-	-	-	-	-
	Finish	-	-	-	-	-
Spider Arm Cover	Material	Resin	Resin	Resin	Resin	Resin
	Finish	Resin	Resin	Resin	Resin	Resin
Outer Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Painted	Painted	Painted	Painted	Painted
Middle Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Painted	Painted	Painted
Inner Ring	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Painted	Painted	Painted
Important notice; If using a chaincase, select a BB-O000(K). If using an E-type FD, select a BB-O000(E)	Black Version, Octalink	Silver Version, Octalink	4arm	4arm	4arm	4arm

## Bottom Bracket (MTB Otolink, Square type) Specifications

Model No.		BB-ES25	BB-ES25-E	BB-ES25-AK	BB-UN26	BB-UN26-E	BB-UN26-K
Cartridge Type BB /E-type		-	X	-	-	X	-
For Chain Case		-	-	X	-	-	X
Spindle	Hollow Pipe	X	X	X	-	-	-
	Splined Spindle	X	X	X	-	-	-
	Material	Steel	Steel	Steel	Steel	Steel	Steel
<Axle Length>	<BB Shell>						
Hollowtech II	83mm (BC1.37)	-	-	-	-	-	-
	68mm (BC1.37)	-	-	-	-	-	-
	73mm (BC1.37)	-	-	-	-	-	-
112.5mm	68mm (BC1.37)	-	-	-	-	-	-
	73mm (BC1.37)	-	-	-	-	-	-
116mm	68mm (BC1.37)	-	-	-	-	-	-
	73mm (BC1.37)	-	-	-	-	-	-
MM110	68mm (BC1.37)	-	-	-	X	X	X
	70mm (M36)	-	-	-	X	-	-
	73mm (BC1.37)	-	-	-	X	-	-
LL113	68mm (BC1.37)	-	-	-	X	X	-
	70mm (M36)	-	-	-	X	-	-
	73mm (BC1.37)	-	-	-	X	X	-
113	68mm (BC1.37)	X	X	-	-	-	-
	70mm (M36)	X	-	-	-	-	-
	73mm (BC1.37)	X	-	-	-	-	-
YL117	68mm (BC1.37)	-	-	-	X* (CL:47.5) X (CL:45)	X* (CL:47.5)	X* (CL:47.5)
	117.5	68mm (BC1.37)	-	-	X	-	X
118	68mm (BC1.37)	X	X	-	-	-	-
	70mm (M36)	X	-	-	-	-	-
	73mm (BC1.37)	X	X	-	-	-	-
XL118	68mm (BC1.37)	-	-	-	-	-	-
	70mm (M36)	-	-	-	-	-	-
	73mm (BC1.37)	-	-	-	-	-	-
121	68mm (BC1.37)	X	X	X*	-	-	-
	70mm (M36)	-	-	-	-	-	-
	73mm (BC1.37)	X	X	-	-	-	-
126	68mm (BC1.37)	X	X	-	-	-	-
	73mm (BC1.37)	X	X	-	-	-	-
	68mm (BC1.37)	-	-	-	X*	-	X*
D-NL (122.5mm)	70mm (M36)	-	-	-	-	-	-
	73mm (BC1.37)	-	-	-	-	-	-
	68mm (BC1.37)	-	-	-	X*	-	-
D-EL (127.5mm)	70mm (M36)	-	-	-	-	-	-
	73mm (BC1.37)	-	-	-	-	-	-
	68mm (BC1.37)	-	-	-	-	-	-
YL116	68mm (BC1.37)	-	-	-	-	-	-
	70mm (M36)	-	-	-	-	-	-
ZL121	73mm (BC1.37)	-	-	-	-	-	
ZL122	73mm (BC1.37)	-	-	-	-	-	
LL123	68mm (BC1.37)	-	-	-	X	X	X (t=1.8)
	70mm (M36)	-	-	-	X	-	-
	73mm (BC1.37)	-	-	-	-	X	-
123SP	68mm (BC1.37)	-	-	-	X	-	-
130	68mm (BC1.37)	-	-	-	X	-	-
Note				* with 1.8mm spacer version also available for FC-M521	*w/FixingBolts	*w/FixingBolts	*w/FixingBolts

# Freehub (MTB) Specifications( Standard /Disc Brake /Roller Brake )

Series		XTR	DXR	Deore XT	Deore LX	Deore	Alivio
Model No.		FH-M970	FH-MX70	FH-M770-S	FH-T660	FH-M590	FH-MC18
Spoke Holes	24H	-	-	-	-	-	-
	28H	-	-	-	-	-	-
	32H	X	X	X	X	X	X
	36H	X	X	X	X	X	X
	40/48H	-	-	-	-	-	-
	Hole PCD (mm)	44/45(Left/Right)	45	44/45(Left/Right)	45	45	45
Freehub Body	Speeds	8/9	1	8/9	8/9	8/9	8/9
	11T compatible	X	-	X	X	X	X
	Quick Engagement	360/36	360/36	360/36	-	-	-
	Material	Titanium	Steel	Steel	Steel	Steel	Steel
O.L.D. (mm)	130	-	-	-	-	-	-
	135	X	-	X	X	X	X
	Others	-	112	-	-	-	-
Flange Diameter (mm)		52.8/ 53.8 (L/R)	53.8	52.8/ 53.8 (L/R)	53.8	53.8	53.8
Flange Distance(mm)		57.4	57.4	57.4	59.2	59.2	60.6
Dish(mm)		6.6	0	6.6	7.6	7.8	7.6
Axle(QR type)	QR Skewer	168/173	-	168/173	168/173mm	168/173mm	168
	Length	146(M10)	-	146(M10)	146mm(M10)	146mm(M10)	146(M10)
	Diameter(mm)	14	14	14	10	10	10
	Material	Aluminum	Aluminum	Aluminum	Steel	Steel	Steel
Axle(Nut type)	Length	-	-	-	-	-	-
	Material	-	-	-	-	-	-
Seal	Hub	X	X	X	X	X	X
	Freewheel	X	X	X	X	X	X
Internal Grease Sleeve		X	X	X	X	X	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Machined
Quick Release Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Barrel
CBN (Cubic Boron Nitride)	Cone Races	X	X	X	X	X	-
	Cup Races	X*	X*	-	-	-	-
Stainless Steel Ball Bearings		X	X	-	-	-	-
Thread for Drum Brake (BC1.37X24)		-	-	-	-	-	-
Note		*Super Finishing	For BMX *Super Finishing	Silver Version		Light weight FH body	Black color available

# Freehub (MTB) Specifications( Standard /Disc Brake /Roller Brake )

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	
Model No.	FH-RM60-8-QR	FH-RM30-8-QR	FH-RM30-8-NT	FH-RM30-7-QR	FH-RM30-7-NT	FH-HF08	
Spoke Holes	24H	-	-	-	-	-	
	28H	-	-	-	-	-	
	32H	X	X	X	-	-	
	36H	X	X	X	X	-	
	40/48H	-	-	-	-	X	
	Hole PCD (mm)	45	45	45	45	45	62.5
Freehub Body	Speeds	8/9	8/9	8/9	7	7	8/9
	11T compatible	X	X	X	X	X	X
	Quick Engagement	-	-	-	-	-	-
	Material	Steel	Steel	Steel	Steel	Steel	Steel
O.L.D. (mm)	130	-	-	-	X	X	-
	135	X	X	X	X	X	-
	Others	-	-	-	-	-	145
Flange Diameter (mm)	53.8	53.8	53.8	53.8	53.8	72	
Flange Distance(mm)	59.2	59.2	59.2	59.2	59.2	54.0	
Dish(mm)	7.3	7.7	7.7	135mm:5.5mm	135mm:5.5mm	2.5	
Axle(QR type)	QR Skewer	166	166	-	161/166	-	178
	Length	146(M10)	146(M10)	-	141/146(M10)	-	156(M10)
	Diameter(mm)	10	10	10	10	10	10
	Material	Steel	Steel	-	Steel	-	Steel
Axle(Nut type)	Length	-	-	185mm(M10)	-	180/185mm(M10)	-
	Material	-	-	Steel	-	Steel	-
Seal	Hub	X	-	-	-	-	X
	Freewheel	X	-	-	-	-	X
Internal Grease Sleeve	-	-	-	-	-	-	
Hub Shell	Material	Aluminum/1pcs	Aluminum/2pcs	Aluminum/2pcs	Aluminum/2pcs	Aluminum/2pcs	Aluminum
	Finish	Machined	Shiny	Shiny	Shiny	Shiny	Anodized
Quick Release Lever	Material	Steel	Steel	-	Steel	-	Aluminum
	Finish	Chrome Plated	Chrome Plated	-	Chrome Plated	-	Anodized
CBN (Cubic Boron Nitride)	Cone Races	-	-	-	-	-	X
	Cup Races	-	-	-	-	-	-
Stainless Steel Ball Bearings	-	-	-	-	-	-	
Thread for Drum Brake (BC1.37X24)	-	-	-	-	-	X	
Note	Black Hub Shell Available	Black Hub Shell Available	Black Hub Shell Available	Black Hub Shell Available	Black Hub Shell Available	For tandem bicycle	

# Freehub (MTB) Specifications(Standard / Disc Brake /Roller Brake )

Series		XTR	SAINT	SAINT	Deore XT	Deore XT	Deore XT	Deore XT
Model No.		FH-M975	FH-M815	FH-M810	FH-M775-L	FH-M775-S	FH-M756-L	FH-M756-S
Spoke Holes	24H	-	-	-	-	-	-	-
	28H	-	-	-	-	-	-	-
	32H	X	X	X	X	X	X	X
	36H	X	X	X	X	X	X	X
	40/48H	-	-	-	-	-	-	-
	Hole PCD (mm)	44/45(L/R)	44/45mm	44/45mm	44/45(L/R)	44/45(L/R)	61	61
Freehub Body	Speeds	8/9	8/9	8/9	8/9	8/9	8/9	8/9
	11T compatible	X	X	X	X	X	X	X
	Quick Engagement	360/36	360/36	360/36	360/36	360/36	-	-
	Material	Titanium	Steel	Steel	Steel	Steel	Steel	Steel
O.L.D. (mm)	130	-	-	-	-	-	-	-
	135	X	-	X	X	X	X	X
	Others	-	150	-	-	-	-	-
Flange Diameter (mm)		52.8/ 53.8 (L/R)	52.8/53.8(L/R)	52.8/53.8(L/R)	52.8/ 53.8 (L/R)	52.8/ 53.8 (L/R)	70.6	70.6
Flange Distance(mm)		57.4	72.4	57.4	57.4	57.4	57.1	57.1
Dish(mm)		6.6	6.6	6.6	6.6	6.6	6.8	6.8
Axle(QR type)	QR Skewer Length(mm)	168/173	-	-	168/173	168/173	168/173	168/173
	Length(mm)	146(M10)	-	-	146(M10)	146(M10)	146(M10)	146(M10)
	Diameter(mm)	14	-	-	14	14	10	10
	Material	Aluminum	-	-	Aluminum	Aluminum	Steel	Steel
Axle(Nut type)	Length	-	183mm(φ12)	168mm(φ12/10)	-	-	-	-
	Material	-	Steel	Steel	-	-	-	-
Seal	Hub	X	X	X	X	X	X	X
	Freewheel	X	X	X	X	X	X	X
Internal Grease Sleeve		X	X	X	X	X	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
Quick Release Lever	Material	Aluminum	-	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	-	-	Anodized	Anodized	Anodized	Anodized
CBN (Cubic Boron Nitride)	Cone Races	X	X	X	X	X	X	X
	Cup Races	X	X	X	-	-	-	-
Stainless Steel Ball Bearings		X	-	-	-	-	-	-
Center Lock Rotor Mount		X	X	X	X	X	-	-
6bolt (PCD 44mm)		-	-	-	-	-	X	X
Note					Black Version	Silver Version	Black Version	Silver Version

# Freehub (MTB) Specifications(Standard / Disc Brake /Roller Brake )

Series		SLX	Deore LX	Deore	Non-Series	Non-Series	Non-Series	Non-Series
Model No.		FH-M665	FH-T665	FH-M595	FH-M629	FH-M529	FH-M525-L	FH-M525-S
Spoke Holes	24H	-	-	-	-	-	-	-
	28H	-	-	-	-	-	-	-
	32H	X	X	X	X	X	X	X
	36H	X	X	X	-	-	X	X
	40/48H	-	-	-	-	-	-	-
	Hole PCD (mm)	44/45(L/R)	44/45(L/R)	45	44/45(L/R)	61	61	61
Freehub Body	Speeds	8/9	8/9	8/9	8/9	8/9	8/9	8/9
	11T compatible	X	X	X	X	X	X	X
	Quick Engagement	360/32	-	-	360/32	-	-	-
	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
O.L.D. (mm)	130	-	-	-	-	-	-	-
	135	X	X	X	X	X	X	X
	Others	-	-	-	-	-	-	-
Flange Diameter (mm)		52.8/53.8(L/R)	52.8/53.8(L/R)	53.8	52.8/53.8(L/R)	70.6	70.6	70.6
Flange Distance(mm)		57.4	57.4	57.4	57.4	57.1	57.1	57.1
Dish(mm)		6.6	6.6	6.6	6.6	6.8	6.8	6.8
Axle(QR type)	QR Skewer Length(mm)	168/173	168/173	168/173	168/173	168/173	168/173	168/173
	Length(mm)	146(M10)	146(M10)	146(M10)	146(M10)	146(M10)	146(M10)	146(M10)
	Diameter(mm)	10	10	10	10	10	10	10
	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
Axle(Nut type)	Length	-	-	-	-	-	-	-
	Material	-	-	-	-	-	-	-
Seal	Hub	X	X	X	X	X	X	X
	Freewheel	X	X	X	X	X	X	X
Internal Grease Sleeve		X	X	X	X	-	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
Quick Release Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
CBN (Cubic Boron Nitride)	Cone Races	X	X	X	X	X	X	X
	Cup Races	-	-	-	-	-	-	-
Stainless Steel Ball Bearings		-	-	-	-	-	-	-
Center Lock Rotor Mount		X	X	X	X	-	-	-
6bolt (PCD 44mm)		-	-	-	-	X	X	-
Note				Light weight FH body	for 36T CS Shimano logo	for 36T CS Shimano logo	Black Version	Silver Version

# Freehub (MTB) Specifications(Standard / Disc Brake /Roller Brake )

Series		Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.		FH-M495A-L	FH-M495A-S	FH-M475-L	FH-M475-S	FH-RM65
Spoke Holes	24H	-	-	-	-	-
	28H	-	-	-	-	-
	32H	X	X	X	X	X
	36H	X	X	X	X	X
	40/48H	-	-	-	-	-
	Hole PCD (mm)	45	45	61	61	45
Freehub Body	Speeds	8/9	8/9	8/9	8/9	8/9
	11T compatible	X	X	X	X	X
	Quick Engagement	-	-	-	-	-
	Material	Steel	Steel	Steel	Steel	Steel
O.L.D. (mm)	130	-	-	-	-	-
	135	X	X	X	X	X
	Others	-	-	-	-	-
Flange Diameter (mm)		53.8	53.8	70.6	70.6	53.8
Flange Distance(mm)		57.4	57.4	57.1	57.1	57.4
Dish(mm)		6.7	6.7	6.8	6.8	6.8
Axle(QR type)	QR Skewer Length(mm)	166/170	166/170	166/170	166/170	166/170
	Length(mm)	146(M10)	146(M10)	146(M10)	146(M10)	146(M10)
	Diameter(mm)	10	10	10	10	10
	Material	Steel	Steel	Steel	Steel	Steel
Axle(Nut type)	Length	-	-	-	-	-
	Material	-	-	-	-	-
Seal	Hub	X	X	X	X	X
	Freewheel	X	X	X	X	X
Internal Grease Sleeve		-	-	-	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized
Quick Release Lever	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Black Plated	Black Plated	Black Plated	Black Plated	Black Plated
CBN (Cubic Boron Nitride)	Cone Races	-	-	-	-	-
	Cup Races	-	-	-	-	-
Stainless Steel Ball Bearings		-	-	-	-	-
Center Lock Rotor Mount		X	X	-	-	X
6bolt (PCD 44mm)		-	-	X	X	-
Note		Black Version	Silver Version	Black Version	Silver Version	

# Freehub (MTB) Specifications( Standard /Disc Brake / Roller Brake )

Series		Tourney
Model No.		RH-IM10
Spoke Holes	24H	-
	28H	-
	32H	-
	36H	X
	40/48H	-
	Hole PCD (mm)	45
Freehub Body	Speeds	-
	11T compatible	-
	Roller Clutch	-
	Material	-
O.L.D. (mm)	130	X
	135	-
	Others	-
Flange Diameter (mm)		54
Flange Distance(mm)		55.1
Dish(mm)		5.85
Axle(QR type)	QR Skewer Length	-
	Length	-
	Material	Steel
Axle(Nut type)	Length	180mm(M10)
	Material	Steel
Seal	Hub	-
	Freewheel	-
Hub Shell	Material	Steel
	Finish	Painted
Note		For 6 or 7-speed multifree wheel



# Front Hub (MTB) Specifications ( Standard /Disc Brake/Roller Brake)

Series		XTR	DXR	Deore XT	Deore LX	Deore	Alivio
Model No.		HB-M970	HB-MX70	HB-M770-S	HB-T660	HB-M590	HB-MC12-P
Spoke Holes	24H	-	-	-	-	-	-
	28H	X	-	-	-	-	-
	32H	X	X	X	X	X	X
	36H	X	X	X	X	-	X
	40/48H	-	-	-	-	-	-
	Hole PCD (mm)	40	40	40	38	38	38
O.L.D. (mm)		100	100	100	100	100	100
Flange Diameter (mm)		50.4	50.4	50.4	48.4	48.4	46
Flange Distance		74	74	74	71.6	71.6	71.6
Axle(QR type)	QR Skewer Length	133mm	-	133mm	133mm	133mm	129/133mm
	Axle Length	108mm	-	108mm	108mm(M10)	108mm(M10)	108mm(M9)
	Diameter(mm)	14	14	14	10	10	9
	Material	Aluminum	Aluminum	Aluminum	Steel	Steel	Steel
Axle(Nut type)	Axle Length	-	-	-	-	-	140mm(M9)
	Material	-	-	-	-	-	Steel
Seal		X	X	X	X	X	X
Stainless Steel Ball Bearings		X	X	-	-	-	-
Internal Grease Sleeve		X	X	X	X	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
CBN (Cubic Boron Nitride)	Cone Races	X	X	X	X	X	-
	Cup Races	X	X	-	-	-	-
Quick Release Lever	Material	Aluminum	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	-	Anodized	Anodized	Anodized	Barrel
Radial Lacing		X	X	X	X	X	-
Note			For BMX racing	Silver Version			Black Version Available

# Front Hub (MTB) Specifications ( Standard /Disc Brake/Roller Brake)

Series		Non-Series	Non-Series	Non-Series	Non-Series
Model No.		HB-RM60-L	HB-RM60-S	HB-RM40	HB-HF08
Spoke Holes	24H	-	-	-	-
	28H	-	-	-	-
	32H	X	X	X	-
	36H	X	X	X	-
	40/48H	-	-	-	X
	Hole PCD (mm)	38	38	38	62.5
O.L.D. (mm)		100	100	100	100
Flange Diameter (mm)		46	46	46	72
Flange Distance		71.6	71.6	71.6	71.6
Axle(QR type)	QR Skewer Length	133mm	133mm	129/133mm	133mm
	Axle Length	108mm	108mm	108mm(M9)	108mm(M9)
	Diameter(mm)	9	9	9	9
	Material	Steel	Steel	Steel	Steel
Axle(Nut type)	Axle Length	-	-	140mm(M9)	-
	Material	-	-	Steel	-
Seal		X	X	-	X
Stainless Steel Ball Bearings		-	-	-	-
Internal Grease Sleeve		-	-	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Machined	Machined	Anodized
CBN (Cubic Boron Nitride)	Cone Races	-	-	-	-
	Cup Races	-	-	-	-
Quick Release Lever	Material	Steel	Steel	Steel	Aluminum
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Anodized
Radial Lacing		-	-	-	-
Note		Black Version	Silver Version		

# Front Hub (MTB) Specifications ( Standard / Disc Brake /Roller Brake)

Series		XTR	Deore XT	Deore XT	Deore XT	Deore XT	SLX
Model No.		HB-M975	HB-M775-L	HB-M775-S	HB-M756-L	HB-M756-S	HB-M665
Spoke Holes	24H	-	-	-	-	-	-
	28H	X	-	-	-	-	-
	32H	X	X	X	X	X	X
	36H	X	X	X	X	X	X
	40/48H	-	-	-	-	-	-
	Hole PCD (mm)	44/40	44/41 (L/R)	44/41 (L/R)	61	61	44
O.L.D. (mm)		100	100	100	100	100	100
Flange Diameter (mm)		52.8/ 50.4 (L/R)	52.8/ 51.4 (L/R)	52.8/ 51.4 (L/R)	70.6	70.6	52.8
Flange Distance		60.6	60.6	60.6	59.4	59.4	60.2
Offset		5.4	5.8	5.8	5.5	5.5	5.3
Axle(QR type)	QR Skewer Length	133mm	133mm	133mm	133mm	133mm	133mm
	Axle Length	108mm	108mm	108mm	108mm(M10)	108mm(M10)	108mm(M10)
	Diameter(mm)	14	14	14	10	10	10
	Material	Aluminum	Aluminum	Aluminum	Steel	Steel	Steel
Axle(Nut type)	Axle Length	-	-	-	-	-	-
	Material	-	-	-	-	-	-
Seal		X	X	X	X	X	X
Internal Grease Sleeve		X	X	X	-	-	X
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
CBN (Cubic Boron Nitride)	Cone Races	X	-	-	X	X	X
Quick Release Lever	Cup Races	X*	-	-	-	-	-
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
Center Lock Mount Type		X	X	X	-	-	X
6bolt (PCD 44mm)		-	-	-	X	X	-
Radial Lacing		Right Side only	Right Side only	Right Side only	-	-	-
Note		*Super Finishing	Black Version	Silver Version	Black Version	Silver Version	

# Front Hub (MTB) Specifications ( Standard / Disc Brake /Roller Brake)

Series		Deore LX	Deore	Non-Series	Non-Series	Non-Series	Non-Series
Model No.		HB-T665	HB-M595	HB-M629	HB-M529	HB-M525-L	HB-M525-S
Spoke Holes	24H	-	-	-	-	-	-
	28H	-	-	-	-	-	-
	32H	X	X	X	X	X	X
	36H	X	X	-	-	X	X
	40/48H	-	-	-	-	-	-
	Hole PCD (mm)	44	44	44	61	61	61
O.L.D. (mm)		100	100	100	100	100	100
Flange Diameter (mm)		52.8	52.8	52.8	70.6	70.6	70.6
Flange Distance		60.2	60.2	60.2	59.2	59.4	59.4
Offset		5.3	5.6	5.3	5.7	5.5	5.5
Axle(QR type)	QR Skewer Length	133mm	133mm	133mm	133mm	133mm	133mm
	Axle Length	108mm(M10)	108mm(M10)	108mm(M10)	108mm(M10)	108mm(M10)	108mm(M10)
	Diameter(mm)	10	10	10	10	10	10
	Material	Steel	Steel	Steel	Steel	Steel	Steel
Axle(Nut type)	Axle Length	-	-	-	-	-	-
	Material	-	-	-	-	-	-
Seal		X	X	X	X	X	X
Internal Grease Sleeve		X	-	X	X	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
CBN (Cubic Boron Nitride)	Cone Races	X	X	X	X	X	X
Quick Release Lever	Cup Races	-	-	-	-	-	-
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
Center Lock Mount Type		X	X	X	-	-	-
6bolt (PCD 44mm)		-	-	-	X	X	X
Radial Lacing		-	-	-	-	-	-
Note				Black Shimano logo	Black Shimano logo	Black Version/ Shimano Logo	Silver Version/ Shimano Logo

# Front Hub (MTB) Specifications ( Standard / Disc Brake /Roller Brake)

Series		Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.		HB-M495A-L	HB-M495A-S	HB-M475-L	HB-M475-S	HB-RM65
Spoke Holes	24H	-	-	-	-	-
	28H	-	-	-	-	-
	32H	X	X	X	X	X
	36H	X	X	X	X	X
	40/48H	-	-	-	-	-
	Hole PCD (mm)	44	44	61	61	44
O.L.D. (mm)		100	100	100	100	100
Flange Diameter (mm)		52.8	52.8	70.6	70.6	52.8
Flange Distance		60.2	60.2	59.4	59.4	60.2
Offset		5.3	5.3	5.5	5.5	5.3
Axle(QR type)	QR Skewer Length	133mm	133mm	133mm	133mm	133mm
	Axle Length	108mm(M10)	108mm(M10)	108mm(M10)	108mm(M10)	108mm(M10)
	Diameter(mm)	10	10	10	10	10
	Material	Steel	Steel	Steel	Steel	Steel
Axle(Nut type)	Axle Length	-	-	-	-	-
	Material	-	-	-	-	-
Seal		X	X	X	X	X
Internal Grease Sleeve		-	-	-	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized
CBN (Cubic Boron Nitride)	Cone Races	-	-	-	-	-
Quick Release Lever	Cup Races	-	-	-	-	-
	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Center Lock Mount Type		X	X	-	-	X
6bolt (PCD 44mm)		-	-	X	X	-
Radial Lacing		-	-	-	-	-
Note		Black Version	Silver Version	Black Version	Silver Version	Black Version

# Front Hub (MTB) Specifications ( Standard / Disc Brake /Roller Brake)

Series		XTR	XTR	SAINT	Deore XT
Model No.		HB-M976	HB-M978	HB-M810	HB-M776-L
Spoke Holes	24H	-	-	-	-
	28H	-	-	-	-
	32H	X	X	X	X
	36H	X	-	X	X
	40/48H	-	-	-	-
	Hole PCD (mm)	52	45	52	52
Thru axle size (mm)		20	15	20	20
O.L.D. (mm)		110	100	110	110
Flange Diameter (mm)		61.6	52.8	61.6	61.6
Flange Distance		61.55	60.05	61.6	61.6
Offset		5.6	5.4	5.6	5.6
Axle(Nut type)	Axle Length	Axle is supplied with Front Suspension Fork	Axle is supplied with Front Suspension Fork	Axle is supplied with Front Suspension Fork	Axle is supplied with Front Suspension Fork
	Material				
Seal		X	X	X	X
Internal Grease Sleeve		X	X	X	X
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized
Cone Races	Ball races finish	CBN	CBN	CBN	CBN
Cup Races		GRINDING	GRINDING	CBN	-
E-thru Lever	Material	-	-	-	-
	Finish	-	-	-	-
Center Lock Mount Type		X	X	X	X
6bolt (PCD 44mm)		-	-	-	-
Note					Black Version

# Front Hub (MTB) Specifications ( Standard / Disc Brake /Roller Brake)

Series		Deore XT	Deore XT	SLX	SLX	Non-Series
Model No.		HB-M778	HB-M758	HB-M668	HB-M667	HB-T708
Spoke Holes	24H	-	-	-	-	-
	28H	-	-	-	-	-
	32H	X	X	X	X	X
	36H	X	X	-	X	X
	40/48H	-	-	-	-	-
	Hole PCD (mm)	45	59/55(L/R)	47	52	45
Thru axle size (mm)		15	15	15	20	8 (SM-AX60)
O.L.D. (mm)		100	100	100	110	100
Flange Diameter (mm)		52.8	68.6/ 64.6 (L/R)	55.8	61.6	52.8
Flange Distance		60.05	59.1	59.8	61.6	60.05
Offset		5.4	5.25	5.3	5.6	5.4
Axle(Nut type)	Axle Length	Axle is supplied with Front Suspension Fork	Axle is supplied with Front Suspension Fork	Axle is supplied with Front Suspension Fork	Axle is supplied with Front Suspension Fork	135.2 (SM-AX60)
	Material					steel (SM-AX60)
Seal		X	X	X	X	X
Internal Grease Sleeve		X	X	X	X	X
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized
Cone Races	Ball races finish	CBN	CBN	CBN	CBN	CBN
Cup Races		CBN	CBN	CBN	-	-
E-thru Lever	Material	-	-	-	-	Alloy (SM-AX60)
	Finish	-	-	-	-	Anodized
Center Lock Mount Type		X	-	X	X	X
6bolt (PCD 44mm)		-	X	-	-	-
Note			Black Version			8mm E-thru, Shimano logo

# Front Hub (MTB) Specifications ( Standard/Disc Brake / Roller Brake )

Series		NEXAVE	NEXUS
Model No.		HB-IM70	HB-IM40
Type		for hub roller brake	for hub roller brake
Spoke Holes	24H	-	-
	28H	-	-
	32H	-	-
	36H	X	X
	40/48H	-	-
	Hole PCD (mm)	70	52
O.L.D. (mm)		100	100
Flange Distance		56.8	61.5
Offset		4.2	4.3
Axle(QR type)	QR Skewer Length	129mm	-
	Axle Length	108mm( M9 )	-
	Material	Steel	-
Axle(Nut type)	Axle Length	-	140mm(M9)
	Material	-	Steel
Seal		X	X
Hub Shell	Material	Aluminum	Aluminum
	Finish	Clear Painted	Machined
Quick Release Lever	Material	Aluminum	-
	Finish	Anodized	-
Structure ( Braking power )		Hyper	Normal
Modulator Setting		26inch or more	26inch or more
Cooling fin on roller brake		-	-
Note			



# Cassette Sprocket (MTB) Specifications

Series name		XTR	XTR	XTR	SAINT/ Deore XT	SAINT/ Deore XT
Model No.		CS-M970	CS-M970	CS-M970	CS-M770	CS-M770
Type		HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket
Combination	Speed	9	9	9	9	9
	9	32*	34*	34*	32*	34*
	8	28*	30*	30*	28*	30*
	7	24*	26*	26*	24*	26*
	6	21*	23*	23*	21*	23*
	5	18*	20*	20*	18*	20*
	4	16*	18*	17*	16	17*
	3	14	16	15	14	15
	2	12	14	13	12	13
1	11	12	11	11	11	
Group		ba	bd	be	aq	as
Chain		Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed
Spider Arm		X	X	X	X	X
Aluminum Lock Ring		X	X	X	X	X
Ti Cog		21/24/28/32T	23/26/30/34T	23/26/30/34T	-	-
Finish		Titanium/ Nickel	Titanium/ Nickel	Titanium/ Nickel	Shot-Chrome	Shot-Chrome
Note		*cogs on spider	*cogs on spider	*cogs on spider	*cogs on spider	*cogs on spider

# Cassette Sprocket (MTB) Specifications

Series name		SAINT/ Deore LX	SLX/ Deore LX	SLX	Deore	Deore	Deore
Model No.		CS-HG80-9	CS-HG80-9	CS-HG80-9	CS-HG61-9	CS-HG61-9	CS-HG61-9
Type		HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket
Combination	Speed	9	9	9	9	9	9
	9	28*	32*	34*	28	32	34
	8	24*	28*	30*	24	28	30
	7	21*	24*	26*	21	24	26
	6	18	21	23	18	21	23
	5	16	18	20	16	18	20
	4	14	16	17	14	16	17
	3	13	14	15	13	14	15
	2	12	12	13	12	12	13
1	11	11	11	11	11	11	
Group		bg	ar	au	bg	ar	au
Chain		Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed
Spider Arm		X	X	X	-	-	-
Aluminum Lock Ring		-	-	-	-	-	-
Ti Cog		-	-	-	-	-	-
Finish		Shot-Chrome/ Shot-Ni	Shot-Chrome/ Shot-Ni	Shot-Chrome/ Shot-Ni	Shot-Ni	Shot-Ni	Shot-Ni
Note		*cogs on spider	*cogs on spider	*cogs on spider			

# Cassette Sprocket (MTB) Specifications

<b>Series name</b>		<b>Non-Series</b>
<b>Model No.</b>		<b>CS-HG61-9</b>
<b>Type</b>		HG Cassette Sprocket
<b>Combination</b>	<b>Speed</b>	9
	9	36
	8	32
	7	28
	6	24
	5	21
	4	18
	3	16
	2	14
1	12	
<b>Group</b>		bh
<b>Chain</b>		Super Narrow HG for 9-speed
<b>Spider Arm</b>		-
<b>Aluminum Lock Ring</b>		-
<b>Ti Cog</b>		-
<b>Finish</b>		Shot-Ni
<b>Note</b>		29er drive train

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# Cassette Sprocket (MTB) Specifications

Series name		Non-Series	Non-Series	Alivio	Alivio	Alivio	Acera/Altus	Acera/Altus
Model No.		CS-HG50-9	CS-HG50-9	CS-HG50-8I	CS-HG50-8I	CS-HG50-8I	CS-HG40-8I	CS-HG40-8I
Type		HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket
Combination	Speed	9	9	8	8	8	8	8
	9	32	34	-	-	-	-	-
	8	28	30	28	30	32	30	32
	7	24	26	24	26	28	26	28
	6	21	23	21	23	24	23	24
	5	18	20	19	20	21	20	21
	4	16	17	17	17	18	17	18
	3	14	15	15	15	15	15	15
	2	12	13	13	13	13	13	13
	1	11	11	11	11	11	11	11
Group		ar	au	bf	an	aw	an	aw
Chain		Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	IG/HG	IG/HG	IG/HG	IG/HG	IG/HG
Spider Arm		-	-	-	-	-	-	-
Aluminum Lock Ring		-	-	-	-	-	-	-
Ti Cog		-	-	-	-	-	-	-
Finish		Ni-plated	Ni-plated	Chrome plated	Chrome plated	Chrome plated	Ni-plated	Ni-plated
Note								

# Cassette Sprocket (MTB) Specifications

Series name		Acera/Altus	Acera/Altus	Acera/Altus	Acera/Altus	Acera	Tourney	Tourney
Model No.		CS-HG40-8I	CS-HG30-8I	CS-HG30-8I	CS-HG30-8I	CS-HG30-I	MF-HG40-7	MF-TZ31-CP
Type		HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Cassette Sprocket	HG Multiple Freewheel	HG/UG Multiple Freewheel
Combination	Speed	8	8	8	8	7	7	7
	9	-	-	-	-	-	-	-
	8	34	30	32	34	-	-	-
	7	26	26	28	26	28	34	34
	6	23	23	24	23	24	24	24
	5	20	20	21	20	21	22	22
	4	17	17	18	17	18	20	20
	3	15	15	15	15	15	18	18
	2	13	13	13	13	13	16	16
	1	11	11	11	11	11	14	14
Group		ao	an	aw	ao	ac	-	-
Chain		IG/HG	IG/HG	IG/HG	IG/HG	IG/HG	HG/UG	HG/UG
Spider Arm		-	-	-	-	-	-	-
Aluminum Lock Ring		-	-	-	-	-	-	-
Ti Cog		-	-	-	-	-	-	-
Finish		Ni-plated	Brown & Black	Brown & Black	Brown & Black	Ni-plated	Ni-plated & Black	Brown
Note								With Chain protector

# Cassette Sprocket (MTB) Specifications

Series name	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney
Model No.	MF-TZ31	MF-TZ07	MF-TZ21-CP	MF-TZ21	MF-TZ30-CP	MF-TZ30	MF-TZ06
Type	HG/UG Multiple Freewheel	HG/UG Multiple Freewheel	HG/UG Multiple Freewheel	HG/UG Multiple Freewheel	HG/UG Multiple Freewheel	HG/UG Multiple Freewheel	HG/UG Multiple Freewheel
Combination	Speed	7	7	7	7	6	6
	9	-	-	-	-	-	-
	8	-	-	-	-	-	-
	7	34	28	28	28	-	-
	6	24	24	24	24	34	28
	5	22	22	22	22	24	24
	4	20	20	20	20	21	21
	3	18	18	18	18	18	18
	2	16	16	16	16	16	16
	1	14	14	14	14	14	14
Group	-	-	-	-	-	-	-
Chain	HG/UG	HG/UG	HG/UG	HG/UG	HG/UG	HG/UG	HG/UG
Spider Arm	-	-	-	-	-	-	-
Aluminum Lock Ring	-	-	-	-	-	-	-
Ti Cog	-	-	-	-	-	-	-
Finish	Brown & Black	Brown & Black	Brown	Brown & Black	Brown	Brown & Black	Brown & Black
Note			With Chain protector		With Chain protector		

# Cassette Sprocket (MTB) Specifications

Series name		Tourney	Tourney	DXR
Model No.		MF-TZ20-CP	MF-TZ20	CS-MX66
Type		HG/UG Multiple Freewheel	HG/UG Multiple Freewheel	Single sprocket for FH-MX70
Combination	Speed	6	6	Single
	9	-	-	-
	8	-	-	-
	7	-	-	-
	6	28	28	-
	5	24	24	-
	4	21	21	-
	3	18	18	-
	2	16	16	-
	1	14	14	-
Group		-	-	-
Chain		HG/UG	HG/UG	1/2" x 3/32"
Spider Arm				-
Aluminum Lock Ring				-
Ti Cog				-
Finish		Brown & Black	Brown & Black	Chrome plated
Note		With Chain protector		For BMX racing

# Chain (MTB) Specifications

Series	XTR Saint	Deore XT	SLX Deore LX	Deore	Altus T300	Non-Series	Tourney
Model No.	CN-7701	CN-HG93	CN-HG73	CN-HG53	CN-HG50	CN-HG40	CN-UG51
Type	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	HG	HG	UG
Pin Link Plate	Zinc-Alloy Plated	Zinc-Alloy Plated	Gray	Gray	Black	Gray	Gray
Roller Link Plate	Zinc-Alloy Plated	Gray	Gray	Brown	Black	Black	Black
Chromizing Treatment Link Pin	X	X	X	X	X	-	-
Note	special rivet	special rivet	special rivet	special rivet			



# Front Suspension (Nexus) Specifications

Series		SHIMANO		SHIMANO	
Model No.		FS-C812		FS-C810	
Adjuster	Auto	X		X	
	Manual	X		X	
Pre-load Adjuster		Dial type		Dial type	
Travel		63mm(53+10)		70mm(60+10)	
Damping		Cartridge Oil		Cartridge Oil	
Spring		Coil		Coil	
Wheel Size		max. 28x2.00 - 700x47C		700C	26"
V-Brake Fixation		-		X	-
Disc Brake (International A) Fixation		X		X	
Compatible HRB		BR-IM75-F		BR-IM75-F	
Dynamo Eye		-		-	
Mudguard Eye		X		X	
Crown	Material	Aluminum		Aluminum	
	Finish	Black Anodized		Black Anodized	
Stanchion	Material	Cromoly		Cromoly	
	Finish	Chrome Plated		Chrome Plated	
Steer Diameter		25.4mm	28.6mm	25.4mm	28.6mm
Cone Race		26.4mm	30mm	26.4mm	30mm
Steer Threads		Threadless		Cromoly	
Steer Material		Cromoly	A7075	1 x 24T or Threadless	1-1/8 x 26T or Threadless
Steer Length ( Threads / mm )		-		160 / 200 / 225 / 250	
Steer Length ( Threadless / mm )		270		270	
Lower Tubes	Material	Magnesium		Magnesium	
	Color	Silver		Silver	
Dynamo Cable Cover		SM-FS11(w/ tapping screw)		SM-FS10(w/ bolts and nuts)	
Disc Brake Hose Cover		SM-FS12(w/ tapping screw)		-	
Note		must be used with QR type hub "SHIMANO Di2" Logo		must be used with QR type hub "SHIMANO Di2" Logo	

## Rear Suspension (Nexus) Specifications

Series		SHIMANO	
Model No.		RS-C810-25	RS-C810-45
Adjuster	Auto	X	X
	Manual	X	X
Travel		20mm	30mm
Damping		-	-
Spring		Air	Air
Eye to Eye		125mm	145mm
Note			

## ***Switch (Nexus) Specifications***

<b>Series</b>	<b>Nexus</b>
<b>Model No.</b>	<b>SW-8S40</b>
<b>Lever type</b>	Seasaw & Button type
<b>Left SW</b>	FS-C810/C812, RS-C810
<b>Right SW</b>	SG: 8-speed
<b>Compatible Brake Lever</b>	BL-IM65
<b>Compatible Front Derailleur</b>	-
<b>Compatible Rear Derailleur</b>	-
<b>Compatible SG</b>	SG-8R56/SG-8C56
<b>Compatible Flight Deck</b>	SC-8S40
<b>Production Factory</b>	
<b>Note</b>	

# Electronic Wire Cable( Nexus) Specifications

Series		SHIMANO					
Model No.		EW-AA	EW-AB	EW-AC	EW-DD	EW-EF	EW-EG
Length		400mm	650mm	280mm	700mm	410mm	500mm
		450mm	700mm	320mm	750mm	450mm	540mm
		500mm	750mm	360mm	900mm	-	-
		550mm	800mm	400mm	950mm	-	-
		600mm	850mm	440mm	1000mm	-	-
		650mm	900mm	480mm	1050mm	-	-
		700mm	950mm	500mm	1100mm	-	-
		750mm	1000mm	520mm	1800mm	-	-
		800mm	1100mm	560mm	1950mm	-	-
		850mm	1200mm	700mm	-	-	-
		1000mm	1250mm	850mm	-	-	-
		1100mm	1300mm	1100mm	-	-	-
		1400mm	2100mm	-	-	-	-
		1800mm	-	-	-	-	-
w/o one side connector		-	1400mm**	600mm***	1400mm****	-	-
Adjustable		-	X	X	X	X	X
For	C810	RD - FD	SC - FD	FS-SC bracket / RS-FD	-	FH-C810 - FD	FH-C811 - FD
	Cyber Nexus	MU - AI	AI - SC bracket	FS-SC bracket / AI-RS	DH - AI	-	-
Note			** w/o Y terminal (B type)	*** w/o Y terminal (C type)	**** w/o one side connector (D type)		

# Electronic Wire Cable( Nexus) Specifications

Series		SHIMANO				
Model No.		EW-NX60 (Long)			EW-NX60 (Short)	
Number of Branch		3	3	4	-	-
Cord Color		Silver	Black	Black	Black	Black
Length	Cord to SL	50mm	50mm	50mm	-	-
	Cord to SM	50mm	50mm	50mm	-	-
	Distributor B *	46mm	46mm	-	-	-
	Distributor C **	-	-	46mm	-	-
	Cord between Distributor B/C and A	315mm	315mm	315mm	-	-
	Distributor A ***	46mm	46mm	46mm	-	-
	Cord to Front LP	180mm	180mm	180mm	-	-
	Cord to Rear LP	-	-	150mm	815mm	885mm
	Cord to Dynamo	545mm	545mm	545mm	-	-
	Main cord	(315mm)	(315mm)	(315mm)	-	-
For		DH-LP-SL-SM	DH-LP-SL-SM	DH-LP-SL-SM	EW(NX60 Long)-LP(Rear)	EW(NX60 Long)-LP(Rear)
Note		Distributor A*** : Branch from DH to LP / main cord Distributor B** : Branch from main cord to SL / SM Distributor C* : Branch from main cord to SL / SM / LP (Rear)				

# NEXAVE Specifications

## RD

Model No.		RD-C810	RD-C531
Pulley Cage		SGS	SS
Compatible Sprocket type		LG 8spd	LG 8spd
Chain		Super Narrow HG for 9-Speed	Super Narrow HG for 9-Speed
Low-Normal Spring Type		-	X
Max Front Difference		22T	Front single use
Total Capacity		44T	22T
Max. Rear Sprocket		33T	33T
Min. Rear Sprocket		11T	11T
Riveted Adapter Available	Road type	-	-
	Bmx-Track type	-	-
Direct Attachment		X	X
Detachable Bracket		-	-
Wheel-Type Cable Guide		-	X
Fluoric Coated Link Bushings		4	2
11T Pulley		X	13/13T
Bracket Body	Material	Aluminum	Aluminum
	Finish	Painted	Painted
Plate Body	Material	Aluminum	Aluminum
	Finish	Painted	Painted
Outer Link	Material	Aluminum	Aluminum
	Finish	Painted	Painted
Inner Link	Material	Steel	Steel
	Finish	Painted	Painted
Outer Plate	Material	Aluminum	Steel
	Finish	Anodized	Painted
Inner Plate	Material	Steel	Steel
	Finish	Pearl Bright	Painted
NOTE		Electrical RD	Only for Intego

## FD

Model No.		FD-C810	FD-T301
Rear Speeds		LG 8spd*	7/8
Chain		Super Narrow HG for 9-Speed	HG/IG
Front SIS		SPCM3	X
Chain Ring		Triple	Triple
Top Swing Link		X	X
E-type BB Mount		X	-
Applicable Chain Line		50mm	47.5mm
Top Gear Teeth		46T	48T
Total Capacity		22T	20T
Top-Middle Min. Capacity		12T	10T
Dual Pull		-	-
Multi Clamp Band		-	-
Powerchange Mechanism		X	-
Chainstay Angle 66 to 69 degrees	Braze-on		-
	28.6mm	Top	X
		Down	X
	31.8mm	Top	X
		Down	X
	34.9mm	Top	-
		Down	-
	Chainstay Angle 63 to 66 degrees	Braze-on	
28.6mm		Top	X
		Down	X
31.8mm		Top	X
		Down	X
34.9mm		Top	-
		Down	-
Front Clamp Band		Material	-
	Finish	-	Painted
Rear Clamp Band	Material	-	Steel
	Finish	-	Painted
BB Plate	Material	Aluminum	-
Outer Link	Material	Steel	Steel
	Finish	Zinc Plated	Zinc Plated
Inner Link	Material	Aluminum	Steel
	Finish	Painted	Painted
Chain Guide	Material	Steel	Steel
	Finish	Chrome Plated	Chrome Plated
Note		Electrical FD *must be used with Super Narrow HG Chain for 9-speed	

# NEXAVE Specifications

## ST

Model No.		ST-T300-S
Lever Type		Tap-Fire
Front		Conventional 3-speed SIS
Rear		7-speed SIS
Internal Hub Gear		-
SL Cable Adjust		X
Optical Gear Display		Dial type
SL Outer Casing		SP41
Stainless SL Cable		Option
Flight Deck w/ Gear Sensor		X
W/ CI-DECK		-
SL Bracket	Material	Aluminum
	Finish	Polished
SL Compatible RD Type		Low Normal
Note		RH Optical Gear Display for Rapid Rise RD

## FC

Model No.		FC-C810
Rear Speeds		LG 8spd
Chaining Combination		46-34-24T SPCM3
Spider or Gear Arm		4arm
PCD (mm)		100/64
Crank Arm Length	170mm	X
	175mm	X
Chain		Super Narrow HG for 9-speed
Bottom Bracket		BB-UN26
Axle Length	Chain Line 47.5	-
	Chain Line 50	130
	Chain Line 52.5	-
	Chain Line 50+t	-
	Chain Line 47.5+t	-
Fixing Nut Available		-
Optional Chain Guard		Black*
Hollowtech Crank Arm		-
Splined Crank (OCTALINK)		-
One-key Release		-
Chain Case Compatible Crank Arm		X
Crank Arm	Material	Aluminum
	Finish	Painted(Silver)
Spider Arm	Material	-
	Finish	-
Spider Arm Cover	Material	-
	Finish	-
Outer Ring	Material	Aluminum
	Finish	Anodized
Middle Ring	Material	Steel
	Finish	Painted(Silver)
Inner Ring	Material	Steel
	Finish	Painted(Silver)
Note		Di2 *Small Chain Guard is available(Silver)

# NEXAVE Specifications

## FH

Model No.		FH-IM70	FH-C810	FH-C811
Type			Roller	Disc
Voltage (110rpm15Ω)			4.1V*	4.1V*
Output Power (110rpm15Ω)			1.12W*	1.12W*
Spoke Holes	28H	-	-	-
	32H	-	X	X
	36H	X	X	X
	Hole PCD (mm)	45	74.4	74.4
Freehub Body	Speeds	8/9	8/9	8/9
	11T compatible	X	X	X
	Roller Clutch	X	-	-
	Material	Steel	Steel	Steel
O.L.D. (mm)	130	-	-	-
	135	X	X	X
Flange Distance		60.0	55.65	55.65
Dish		6.8	7	7
Axle(QR)	QR Skewer Length	-	-	168mm
	Length	-	-	146mm(M10)
	Material	-	-	Steel
Axle(Nut)	Length	185mm (M10)	185mm(M10)	-
	Material	Steel	Steel	-
Seal	Hub	X	X	X
	Freewheel	X	X	X
Hub Shell	Material	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized
Quick Release Lever	Material	-	-	Aluminum
	Finish	-	-	Anodized
CBN (Cubic Boron Nitride)	Cone Races	-	X	X
	Cup Races	-	-	-
Rotor Mount		-	-	6-bolts
EW(Electric Cable) Type		-	EW-EF	EW-EG
Note		* Reference data		

## IF

Model No.		IF-C530-VS
Speed		3
Silent Clutch		X
Gear Change Support Mechanism		X
Super Light Shifting		X
Left Hand Dust Cap		X
Brake		V-Brake
Over Locknut Dim.	OLD(mm)	136mm
Dropout Width Dim.	Left(mm)	8
	Right(mm)	8
Non Turn Washer	Left(mm)	6
	Right(mm)	6
Gear Ratio	Total	186%
	1	0.73
	2	1
	3	1.36
Hub Shell Material		Aluminum
Finish( Corrosion Resistant )		X
Weight		983g
Spoke Hole		36H
Spoke Size		#14
Sprocket		8
Belcrank	Model No.	SM-BC05(Belcrank5)
	Shifting Lever	ST-C530(L)
Note		Only LG gear compatible

## HB

Model No.		HB-IM70
Spoke Holes	24H	-
	28H	-
	32H	-
	36H	X
	40/48H	-
Hole PCD (mm)		70
O.L.D. (mm)		100
Flange Distance		56.8
Offset		4.2
Axle(QR)	QR Skewer Length	129mm
	Axle Length	108mm(M9)
	Material	Steel
Axle(Nut)	Axle Length	-
	Material	-
Seal		X
Hub Shell	Material	Aluminum
	Finish	Clear Painted
Quick Release Lever	Material	Aluminum
	Finish	Anodized
Structure		Hyper
Modulator Setting		26inch or more
Note		



# NEXAVE Specifications

## CS

Model No.		CS-LG50
Type		LG Cassette Sprocket
Combination	Speed	8
	9	-
	8	33
	7	29
	6	25
	5	21
	4	17
	3	15
	2	13
1	11	
Group		bb
Chain		Super Narrow HGfor 9-speed
Spider Arm		-
Aluminum Lock Ring		-
Steel Cog		11-33T
Ti Cog		-
Finish		Ni-plated
Note		With Spoke Protector

## CN

Model No.	CN-HG73	CN-HG53	CN-HG50
Type	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	HG
Pin Link Plate	Gray	Gray	Black
Roller Link	Gray	Brown	Black
Chromizing	X	X	X
Note	special rivet	special rivet	

# NEXAVE Specifications

## FS

Model No.		FS-C812		FS-C810	
Adjuster	Auto	X		X	
	Manual	X		X	
Pre-load Adjuster		Dial type		Dial type	
Travel		63mm(53+10)		70mm(60+10)	
Damping		Cartridge Oil		Cartridge Oil	
Spring		Coil		Coil	
Wheel Size		max. 28x2.00 - 700x47C	700C	26"	
V-Brake Fixation		-		X	
Disc Brake (International A) Fixation		X		X	
Compatible HRB		BR-IM75-F		BR-IM75-F	
Dynamo Eye		-		-	
Mudguard Eye		X		X	
Crown	Material	Aluminum		Aluminum	
	Finish	Black Anodized		Black Anodized	
Stanchion	Material	Cromoly		Cromoly	
	Finish	Chrome Plated		Chrome Plated	
Steer Diameter		25.4mm	28.6mm	25.4mm	28.6mm
Cone Race		26.4mm	30mm	26.4mm	27mm / 30mm
Steer Threads		Threadless		Cromoly	
Steer Material		Cromoly	A7075	1 x 24T or Threadless	1-1/8 x 26T or Threadless
Steer Length ( Threads / mm )		-		160 / 200 / 225 / 250	
Steer Length ( Threadless / mm )		270		270	
Lower Tubes	Material	Magnesium		Magnesium	
	Color	Silver		Silver	
Dynamo Cable Cover		SM-FS11(w/ tapping screw)		SM-FS10(w/ bolts and nuts)	
Disc Brake Hose Cover		SM-FS12(w/ tapping screw)		-	
Note		must be used with QR type hub "SHIMANO Di2" Logo		must be used with QR type hub "SHIMANO Di2" Logo	

## RS

Model No.		RS-C810-25	RS-C810-45
Adjuster	Auto	X	X
	Manual	X	X
Travel		20mm	30mm
Damping		-	-
Spring		Air	Air
Eye to Eye		125mm	145mm
Note			

# NEXAVE Specifications

## SW

Model No.	SW-C810
Lever type	Seasaw & Button type
Left SW	FD:Triple
Right SW	RD: 8-speed
Compatible Brake Lever	BL-C901/C800/C600
Compatible Front Derailleur	FD-C810
Compatible Rear Derailleur	RD-C810
Compatible SG	-
Compatible Flight Deck	SC-C810
Note	

Model No.	SM-SW10
Application	SC bracket
Compatible Switch	SW-C810C/SW-8S40C
Compatible Flight Deck	SC-C810/SC-8S40
Shrink Tube	-
Cable	Connectable /with small connector
Cable Length	600mm
Fixing Band	-
Note	SC bracket parts for neat cables

Model No.	SW-C810C(L)
	Left SW
Application	Operator for FD:Triple/Suspension
Compatible Front Derailleur	FD-C810
Compatible Rear Derailleur	-
Compatible Suspension	FS-C810, C812 / RS-C810
Compatible SG	-
Compatible SC bracket	SM-SW10
Shrink tube	X
Cable	Connectable
Cable length	300mm
Note	Switch parts for neat cables

## EW

Model No.		EW-AA	EW-AC	EW-DD	EW-EF	EW-EG
Length*		400mm	280mm	700mm	410mm	500mm
		450mm	320mm	750mm	450mm	540mm
		500mm	360mm	900mm	-	-
		550mm	400mm	950mm	-	-
		600mm	440mm	1000mm	-	-
		650mm	480mm	1050mm	-	-
		700mm	500mm	1100mm	-	-
		750mm	520mm	1800mm	-	-
		800mm	560mm	1950mm	-	-
		850mm	700mm	-	-	-
		1000mm	850mm	-	-	-
		1100mm	1100mm	-	-	-
		1400mm	-	-	-	-
	1800mm	-	-	-	-	
w/o one side connector		-	600mm***	1400mm****	-	-
Adjustable		-	X	X	X	X
For	C810	RD - FD	FS-SC bracket / RS-FD	-	FH-C810 - FD	FH-C811 - FD
	Cyber Nexus	MU - AI	FS-SC bracket / AI-RS	DH - AI	-	-
Note			*** w/o Y terminal (C type)	**** w/o one side connector (D type)		

SW-C810C(R)	SW-8S40C(L)	SW-8S40C(R)
Right SW	Left SW	Right SW
Operator for RD:8spd	Operator for Suspension	Operator for SG:8spd
-	-	-
RD-C810	-	-
-	FS-C810, C812 / RS-C810	-
SG-8R45 / SG-8C45	-	SG-8R45 / SG-8C45
SM-SW10	SM-SW10	SM-SW10
X	X	X
Connectable	Connectable	Connectable
300mm	300mm	300mm
Switch parts for neat cables	Switch parts for neat cables	Switch parts for neat cables

# NEXAVE Specifications

## SC

Model No.		SC-C810
Wheel Size Range	24"-26"-700C	X
Front Single Gear Available		-
Current Speed		X
Clock		X
Trip Time		-
Trip Distance		X
Trip Meter Reset		X
ODO Meter		X
ODO Meter Reset		X
Maximum Speed		-
Average Speed		-
Gear Position Display		X
Gear Shifting Mode Select Switch		by SW-C810 SW-C810C
RD(SG) -Auto and Manual Display		X
Low Battery Display		X
Suspension Mode Select Switch		by SW-C810
Suspension Mode Display		X
Suspension Hard and Soft Display		X
Display Panel Detachable		X
Back Light		X
Beep (on and off switch)		by SW-C810 SW-C810C

ARCHIVE

## Rear Derailleur (Road) Specifications

Series	Dura-Ace	Ultegra	Ultegra	105	105	105	105	TIAGRA	TIAGRA	SORA	SORA
Model No.	RD-7900	RD-6700	RD-6700	RD-5600-S	RD-5600-L	RD-5600-S	RD-5600-L	RD-4500	RD-4500	RD-3400	RD-3400
Pulley Cage	SS	SS	GS	SS	SS	GS	GS	SS	GS	SS	GS
Speeds	10	10	10	10	10	10	10	9	9	9	9
Max Front Difference	16T	14T	22T	16T	16T	22T	22T	16T	22T	16T	22T
Total Capacity	33T	33T	39T	29T	29T	37T	37T	31T	37T	31T	37T
Max. Rear Sprocket	28T	28T	28T	27T	27T	27T	27T	27T	27T	27T	27T
Min. Rear Sprocket	11T	11T	11T	11T	11T	11T	11T	11T	11T	11T	11T
Riveted Adapter Available	-	-	-	-	-	-	-	-	-	-	-
Direct Attachment	X	X	X	X	X	X	X	X	X	X	X
Fluoric Coated Link Bushing	4	4	4	2	2	2	2	2	2	2	2
11T Pulley	X	X	X	X	X	X	X	X	X	X	X
Sealed Bearing Guide Pulley	X	-	-	-	-	-	-	-	-	-	-
Sealed Bearing Tension Pulley	X	X	X	-	-	-	-	-	-	-	-
Bracket Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Painted	Painted	Clear Coated	Clear Coated	Clear Coated	Painted	Clear Coated	Clear Coated	Painted
Plate Body	Material	Engineering Composite	Engineering Composite	Engineering Composite	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Resin
	Finish	Painted	Painted	Painted	Clear Coated	Clear Coated	Clear Coated	Painted	Clear Coated	Clear Coated	Painted
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Painted	Painted	Clear Coated	Clear Coated	Clear Coated	Painted	Clear Coated	Clear Coated	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Anodized	Painted	Painted	Pearl Bright	Pearl Bright	Pearl Bright	Painted	Plated	Plated	Plated
Outer Plate	Material	Carbon	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel	Steel	Steel
	Finish	-	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Painted	Painted	Painted
Inner Plate	Material	Carbon	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel	Steel	Steel
	Finish	-	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Plated	Plated	Plated
Note				Silver version	Slate Black version	Silver version	Slate Black version				

## Rear Derailleur (Road) Specifications

<b>Series</b>	<b>2300</b>	<b>A050</b>	
<b>Model No.</b>	<b>RD-2300</b>	<b>RD-A050</b>	
<b>Pulley Cage</b>	Smart	Smart	
<b>Speeds</b>	8	7	
<b>Max Front Difference</b>	22T	14T	
<b>Total Capacity</b>	35T	29T	
<b>Max. Rear Sprocket</b>	26T	28T	
<b>Min. Rear Sprocket</b>	12T	13T	
<b>Riveted Adapter Available</b>	-	X	
<b>Direct Attachment</b>	X	X	
<b>Fluoric Coated Link Bushing</b>	-	-	
<b>11T Pulley</b>	11T / 15T	13/13T	
<b>Sealed Bearing Guide Pulley</b>	-	-	
<b>Sealed Bearing Tension Pulley</b>	-	-	
<b>Bracket Body</b>	<b>Material</b>	Aluminium	Resin
	<b>Finish</b>	Painted	Painted
<b>Plate Body</b>	<b>Material</b>	Resin	Resin
	<b>Finish</b>	Painted	Painted
<b>Outer Link</b>	<b>Material</b>	Steel	Steel
	<b>Finish</b>	Painted	Chrome Plated
<b>Inner Link</b>	<b>Material</b>	Steel	Steel
	<b>Finish</b>	Zinc Plated	Zinc Plated
<b>Outer Plate</b>	<b>Material</b>	Steel	Steel
	<b>Finish</b>	Painted	Chrome Plated
<b>Inner Plate</b>	<b>Material</b>	Steel	Steel
	<b>Finish</b>	Zinc Plated	Painted
<b>Note</b>			

# Front Derailleur (Road) Specifications

Series	Dura-Ace	Dura-Ace	Ultegra	Ultegra	Ultegra	Ultegra	105	
Model No.	FD-7900-B	FD-7900-F	FD-6700-B	FD-6700-F	FD-6703-B	FD-6703-F	FD-5600-SB	
Rear Speeds	10	10	10	10	10	10	10	
Front SIS	X	X	X	X	X	X	X	
Chain Ring	Double	Double	Double	Double	Triple	Triple	Double	
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	
Mount Type	Clamp Band	Brazed-On	Clamp Band	Brazed-On	Clamp Band	Brazed-On	Clamp Band	
Applicable Chainline	43.5mm	43.5mm	43.5mm	43.5mm	45mm	45mm	43.5mm	
Clamp Band Diameter	28.6/31.8/34.9mm	-	*(28.6)/31.8 /34.9mm	-	*(28.6)/31.8 /34.9mm	-	*(28.6)/31.8/34.9mm	
Top Gear Teeth	50-56T	50-56T	50-56T	50-56T	52T	52T	50-56T	
Capacity	16T	16T	16T	16T	22T	22T	16T	
Chainstay Angle	61-66 Degrees	61-66 Degrees	61-66 Degrees	61-66 Degrees	63-66 Degrees	63-66 Degrees	61-66 Degrees	
Compatible Adapter	SM-AD11(31.8mm)	-	X	-	X	-	X	-
	SM-AD15(34.9mm)	-	X	-	X	-	X	-
Front Clamp Band	Material	Aluminum	-	Aluminum	-	Aluminum	-	Aluminum
	Finish	Anodized	-	Painted	-	Painted	-	Clear Coated
Rear Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Painted	Painted	Painted	Painted	Clear Coated
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Painted	Painted	Painted	Painted	Clear Coated
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Painted	Painted	Painted	Painted	Clear Coated
Chain Guide	Material	Aluminum	Aluminum	Steel	Steel	Steel	Steel	Steel
	Finish	Nickel Plated	Nickel Plated	Pearl Bright	Pearl Bright	Pearl Bright	Pearl Bright	Chrome Plated
Note			*W/Multi Clamp Band		*W/Multi Clamp Band		Silver version *W/Multi Clamp Band	

## Front Derailleur (Road) Specifications

Series	105	105	105	105	105	105
Model No.	FD-5600-LB	FD-5600-SF	FD-5600-LF	FD-5603-SB	FD-5603-LB	FD-5603-SF
Rear Speeds	10	10	10	10	10	10
Front SIS	X	X	X	X	X	X
Chain Ring	Double	Double	Double	Triple	Triple	Triple
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional
Mount Type	Clamp Band	Brazed-On	Brazed-On	Clamp Band	Clamp Band	Brazed-On
Applicable Chainline	43.5mm	43.5mm	43.5mm	45mm	45mm	45mm
Clamp Band Diameter	*(28.6)/31.8/34.9mm	-	-	*(28.6)/31.8/34.9mm	*(28.6)/31.8/34.9mm	-
Top Gear Teeth	50-56T	50-56T	50-56T	50T	50T	50T
Capacity	16T	16T	16T	20T	20T	20T
Chainstay Angle	61-66 Degrees	61-66 Degrees	61-66 Degrees	63-66 Degrees	63-66 Degrees	63-66 Degrees
Compatible Adapter	SM-AD11(31.8mm)	-	X	X	-	X
	SM-AD15(34.9mm)	-	X	X	-	X
Front Clamp Band	Material	Aluminum	-	-	Aluminum	Aluminum
	Finish	Clear Coated	-	-	Clear Coated	Clear Coated
Rear Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Note	Slate Black version *W/Multi Clamp Band	Silver version	Slate Black version	Silver version *W/Multi Clamp Band	Slate Black version *W/Multi Clamp Band	Silver version



## Front Derailleur (Road) Specifications

Series	105	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	
Model No.	FD-5603-LF	FD-R770-B	FD-R770-F	FD-R773-2B	FD-R773-2F	FD-R773-0B	FD-R773-0F	
Rear Speeds	10	10	10	10	10	10	10	
Front SIS	X	X	X	X	X	X	X	
Chain Ring	Triple	Double	Double	Triple	Triple	Triple	Triple	
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	
Mount Type	Brazed-On	Clamp Band	Brazed-On	Clamp Band	Brazed-On	Clamp Band	Brazed-On	
Applicable Chainline	45mm	43.5mm	43.5mm	45mm	45mm	45mm	45mm	
Clamp Band Diameter	-	*(28.6)/31.8/34.9mm	-	*(28.6)/31.8/34.9mm	-	*(28.6)/31.8/34.9mm	-	
Top Gear Teeth	50T	50-56T	50-56T	52T	52T	50T	50T	
Capacity	20T	16T	16T	22T	22T	20T	20T	
Chainstay Angle	63-66 Degrees	61-66 Degrees	61-66 Degrees	63-66 Degrees	63-66 Degrees	63-66 Degrees	63-66 Degrees	
Compatible Adapter	SM-AD11(31.8mm)	X	-	X	-	X	-	X
	SM-AD15(34.9mm)	X	-	X	-	X	-	X
Front Clamp Band	Material	-	Aluminum	-	Aluminum	-	Aluminum	-
	Finish	-	Clear Coated	-	Clear Coated	-	Clear Coated	-
Rear Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Note	Slate Black version	*W/Multi Clamp Band / For flat handlebar shifter SL-R770.	For flat handlebar shifter SL-R770.	*W/Multi Clamp Band / For flat handlebar shifter SL-R770.	For flat handlebar shifter ST-L770.	*W/Multi Clamp Band / For flat handlebar shifter ST-L770.	For flat handlebar shifter ST-L770.	

## Front Derailleur (Road) Specifications

Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	
Model No.	FD-R440-B	FD-R440-F	FD-R440-LB	FD-R440-LF	FD-R443-B	FD-R443-F	FD-R443-LB	FD-R443-LF	
Rear Speeds	9	9	9	9	9	9	9	9	
Front SIS	X	X	X	X	X	X	X	X	
Chain Ring	Double	Double	Double	Double	Triple	Triple	Triple	Triple	
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	
Mount Type	Clamp Band	Brazed-On	Clamp Band	Brazed-On	Clamp Band	Brazed-On	Clamp Band	Brazed-On	
Applicable Chainline	43.5mm	43.5mm	43.5mm	43.5mm	45mm	45mm	45mm	45mm	
Clamp Band Diameter	28.6/31.8mm	-	28.6/31.8mm	-	28.6/31.8mm	-	28.6/31.8mm	-	
Top Gear Teeth	50-56T	50-56T	50-56T	50-56T	52T	52T	52T	52T	
Capacity	16T	16T	16T	16T	22T	22T	22T	22T	
Chainstay Angle	61-66 Degrees	61-66 Degrees	61-66 Degrees	61-66 Degrees	63-66 Degrees	63-66 Degrees	63-66 Degrees	63-66 Degrees	
Compatible Adapter	SM-AD11(31.8mm)	-	X	-	X	-	X	-	X
	SM-AD15(34.9mm)	-	X	-	X	-	-	-	-
Front Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel	Barrel	Painted	Painted	Barrel	Barrel	Painted	Painted
Rear Clamp Band	Material	Aluminum	-	Aluminum	-	Aluminum	-	Aluminum	-
	Finish	Barrel	-	Painted	-	Barrel	-	Painted	-
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel	Barrel	Painted	Painted	Barrel	Barrel	Painted	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel	Barrel	Barrel	Barrel	Barrel	Barrel	Barrel	Painted
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Note	Designed to work with flat handlebar shifter SL-R660/R440.		Designed to work with flat handlebar shifter SL-R660/R440. Black Version		Designed to work with flat handlebar shifter SL-R660/R440.		Designed to work with flat handlebar shifter SL-R660/R440. Black Version		

## Front Derailleur (Road) Specifications

Series	Non-Series	Non-Series	TIAGRA	TIAGRA	TIAGRA	TIAGRA	
Model No.	FD-R453-B	FD-R453-F	FD-4500-B	FD-4500-F	FD-4503-B	FD-4503-F	
Rear Speeds	9	9	9	9	9	9	
Front SIS	X	X	X	X	X	X	
Chain Ring	Triple	Triple	Double	Double	Triple	Triple	
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	
Mount Type	Clamp Band	Brazed-On	Clamp Band	Brazed-on	Clamp Band	Brazed-on	
Applicable Chainline	45mm	45mm	43.5mm	43.5mm	45mm	45mm	
Clamp Band Diameter	*(28.6)/31.8 34.9mm	-	*(28.6)/31.8 34.9mm	-	*(28.6)/31.8 34.9mm	-	
Top Gear Teeth	50T	50T	50-56T	50-56T	50T	50T	
Capacity	20T	20T	16T	16T	20T	20T	
Chainstay Angle	63-66 Degrees	63-66 Degrees	61-66 Degrees	61-66 Degrees	63-66 Degrees	63-66 Degrees	
Compatible Adapter	SM-AD11(31.8mm)	-	X	-	X	-	X
	SM-AD15(34.9mm)	-	X	-	X	-	X
Front Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Rear Clamp Band	Material	Aluminum	-	Aluminum	-	Aluminum	-
	Finish	Clear Coated	-	Clear Coated	-	Clear Coated	-
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated
Inner Link	Material	Zinc	Zinc	Zinc	Zinc	Zinc	Zinc
	Finish	Plated	Plated	Plated	Plated	Plated	Plated
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Pearl Bright Plated	Pearl Bright Plated	Pearl Bright Plated	Pearl Bright Plated	Pearl Bright Plated	Pearl Bright Plated
Note	*W/Multi Clamp Band		*W/Multi Clamp Band		*W/Multi Clamp Band		

## Front Derailleur (Road) Specifications

Series	TIAGRA	TIAGRA	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series
Model No.	FD-4403-B	FD-4403-F	FD-R440A-B	FD-R440A-F	FD-R440A-LB	FD-R440A-LF	FD-R443A-B
Rear Speeds	9	9	8	8	8	8	8
Front SIS	X	X	X	X	X	X	X
Chain Ring	Triple	Triple	Double	Double	Double	Double	Triple
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional
Mount Type	Clamp Band	Brazed-on	Clamp Band	Brazed-On	Clamp Band	Brazed-On	Clamp Band
Applicable Chainline	45mm	45mm	43.5mm	43.5mm	43.5mm	43.5mm	45mm
Clamp Band Diameter	28.6//31.8 mm	-	28.6/31.8mm	-	28.6/31.8mm	-	28.6/31.8mm
Top Gear Teeth	52T	52T	50-53T	50-53T	50-53T	50-53T	52T
Capacity	22T	22T	16T	16T	16T	16T	22T
Chainstay Angle	63-66 Degrees	63-66 Degrees	61-66 Degrees	61-66 Degrees	61-66 Degrees	61-66 Degrees	63-66 Degrees
Compatible Adapter	SM-AD11(31.8mm)	-	X	-	X	-	X
	SM-AD15(34.9mm)	-	X	-	-	-	-
Front Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel	Barrel	Barrel	Barrel	Painted	Painted
Rear Clamp Band	Material	Aluminum	-	Aluminum	-	Aluminum	-
	Finish	Barrel	-	Barrel	-	Painted	-
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel	Barrel	Barrel	Barrel	Painted	Barrel
Inner Link	Material	Zinc	Zinc	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Pearl Plated	Pearl Plated	Barrel	Barrel	Barrel	Barrel
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome plated	Chrome plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Note			Designed to work with Flat handlebar shifter SL-R440/ST-R220.		Designed to work with Flat handlebar shifter SL-R440/ST-R220.Black Version		Designed to work with shifter SL-R4

# Front Derailleur (Road) Specifications

Series	Non-Series	Non-Series	Non-Series	SORA	SORA	SORA	SORA	
Model No.	FD-R443A-F	FD-R443A-LB	FD-R443A-LF	FD-3400-B	FD-3400-F	FD-3403-B	FD-3403-F	
Rear Speeds	8	8	8	9	9	9	9	
Front SIS	X	X	X	X	X	X	X	
Chain Ring	Triple	Triple	Triple	Double	Double	Triple	Triple	
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	Conventional	
Mount Type	Brazed-On	Clamp Band	Brazed-On	Clamp Band	Brazed-on	Clamp Band	Brazed-On	
Applicable Chainline	45mm	45mm	45mm	43.5mm	43.5mm	45mm	45mm	
Clamp Band Diameter	-	28.6/31.8mm	-	*(28.6)/31.8/ 34.9mm	-	*(28.6)/31.8/ 34.9mm	-	
Top Gear Teeth	52T	52T	52T	50-53T	50-53T	50T	50T	
Capacity	22T	22T	22T	16T	16T	20T	20T	
Chainstay Angle	63-66 Degrees	63-66 Degrees	63-66 Degrees	61-66 Degrees	61-66 Degrees	63-66 Degrees	63-66 Degrees	
Compatible Adapter	SM-AD11(31.8mm)	X	-	X	-	X	-	X
	SM-AD15(34.9mm)	X	-	X	-	X	-	X
Front Clamp Band	Material	Aluminum	Aluminum	Aluminum	Steel	Aluminum	Steel	Aluminum
	Finish	Barrel	Painted	Painted	Painted	Painted	Painted	Painted
Rear Clamp Band	Material	-	Aluminum	-	Aluminum	-	Aluminum	-
	Finish	-	Painted	-	Painted	-	Painted	-
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel	Painted	Painted	Painted	Painted	Painted	Painted
Inner Link	Material	Aluminum	Aluminum	Aluminum	Zinc	Zinc	Zinc	Zinc
	Finish	Barrel	Barrel	Barrel	Plated	Plated	Plated	Plated
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Finish	Chrome Plated	Chrome Plated	Chrome Plated	Plated	Plated	Plated	Plated
Note	with Flat handlebar 40/ST-R223.	Designed to work with Flat handlebar shifter SL-R440/ST-R223. Black Version		*W/Multi Clamp Band		*W/Multi Clamp Band		

## Front Derailleur (Road) Specifications

Series	2300	2300	2300	2300	A050	
Model No.	FD-2300-B	FD-2300-F	FD-2303-B	FD-2303-F	FD-A050	
Rear Speeds	8	8	8	8	7	
Front SIS	X	X	X	X	-	
Chain Ring	Double	Double	Triple	Triple	Double	
Link Type	Conventional	Conventional	Conventional	Conventional	Conventional	
Mount Type	Clamp Band	Brazed-on	Clamp Band	Brazed-On	Clamp Band	
Applicable Chainline	43.5mm	43.5mm	45mm	45mm	43.5mm	
Clamp Band Diameter	*(28.6)/31.8	-	*(28.6)/31.8	-	28.6/31.8mm	
Top Gear Teeth	50-53T	50-53T	52T	52T	53T	
Capacity	16T	16T	22T	22T	16T	
Chainstay Angle	61-66 Degrees	61-66 Degrees	63-66 Degrees	63-66 Degrees	61-66 Degrees	
Compatible Adapter	SM-AD11(31.8mm)	-	X	-	X	
	SM-AD15(34.9mm)	-	X	-	-	
Front Clamp Band	Material	Aluminum	Aluminum	Aluminum	Aluminum	Steel
	Finish	Painted	Painted	Painted	Painted	Zinc Plated
Rear Clamp Band	Material	Steel	-	Steel	-	Steel
	Finish	Painted	-	Painted	-	Zinc Plated
Outer Link	Material	Aluminum	Aluminum	Aluminum	Aluminum	Steel+Resin
	Finish	Painted	Painted	Painted	Painted	Zinc Plated
Inner Link	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Plated	Plated	Zinc Plated
Chain Guide	Material	Steel	Steel	Steel	Steel	Steel
	Finish	Plated	Plated	Plated	Plated	Chrome Plated
Note	*W/Multi Clamp Band		*W/Multi Clamp Band			

# Shift / Brake Lever (Road) Specifications

Series		Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace	Ultegra	Ultegra	
Model No.		ST-7900	SL-7900	SL-BS79	SL-7700	SL-BS77	ST-6700	ST-6703	
Lever Type		Dual Control Lever	Down Tube Shifter	Bar end Shifter	Down Tube Shifter	Bar end Shifter	Dual Control Lever	Dual Control Lever	
Shift Lever Specifications	Front	Double	Double / Triple	Double / Triple	Double / Triple	Double / Triple	Double	Triple	
	Rear	10	10	10	9	9	10	-	
	Optical Gear Display Unit		-	-	-	-	-	-	-
	Flight Deck	With Gear Sensor	x	-	-	-	-	X	X
		Without Gear Sensor	-	-	-	-	-	-	-
	Multi-Bearing Construction		1	2	-	-	-	1	2
	Outer Casing	Lever side	SP41	-	SP41	-	SP40	SP41	SP41
		RD side	SP41 Sealed	SP41 Sealed	SP41 Sealed	SP40 Sealed	SP40 Sealed	SP41 Sealed	SP41 Sealed
	Stainless Cable		X	X	X	X	X	X	X
	Clamp Band		-	-	-	-	-	-	-
Brake Lever Specifications	Reach Adjust	X	-	-	-	-	X	X	
	Clamp Band	23.8mm/ 24.2mm	-	-	-	-	23.8mm/ 24.2mm	23.8mm/ 24.2mm	
	Super SLR	X	-	-	-	-	X	X	
Bracket	Material	Engineering Composite	-	-	-	-	Engineering Plastic	Engineering Plastic	
	Finish	Engineering Composite	-	-	-	-	Engineering Plastic	Engineering Plastic	
Lever	Material	Carbon	Aluminum	Aluminum	Aluminum	Aluminum	Engineering Composite	Engineering Composite	
	Finish	Painted	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Painted	Painted	
Note									

# Shift / Brake Lever (Road) Specifications

Series		Ultegra	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	105	
Model No.		SL-BS64-8	ST-R700-(R)	ST-R700-(L)	ST-R701	ST-R703	BL-R600	ST-5600-S/L-(R)	
Lever Type		Bar end Shifter	Dual Control Lever	Dual Control Lever	Dual Control Lever	Dual Control Lever	Brake Lever	Dual Control Lever	
Shift Lever Specifications	Front	Double / Triple	-	* (Double / Triple)	Double	Triple	-	-	
	Rear	8	10	-	-	-	-	10	
	Optical Gear Display Unit		-	-	-	-	-	-	-
	Flight Deck	With Gear Sensor	-	X	X	X	X	-	X
		Without Gear Sensor	-	-	-	-	-	-	-
	Multi-Bearing Construction		-	-	-	-	-	-	-
	Outer Casing	Lever side	SP40	SP41	SP41	SP41	SP41	-	SP41
		RD side	SP40 Sealed	SP41 Sealed	SP41 Sealed	SP41 Sealed	SP41 Sealed	-	SP41 Sealed
	Stainless Cable		X	X	X	X	X	-	X
Clamp Band		-	-	-	-	-	-	-	
Brake Lever Specifications	Reach Adjust	-	Spacer Use	Spacer Use	Spacer Use	Spacer Use	-	-	
	Clamp Band	-	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	
	Super SLR	-	-	-	-	-	X	X	
Bracket	Material	-	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Aluminum	Engineering Plastic	
	Finish	-	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Barrel	Engineering Plastic	
Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Anodized	Clear Coated	
Note				Before running change	After running change	After running change			



# Shift / Brake Lever (Road) Specifications

Series		105	105	105	TIAGRA	TIAGRA	TIAGRA	TIAGRA	
Model No.		ST-5600-S/L-(L)	ST-5601-S/L	ST-5603-S/L	ST-4500-(R)	ST-4500-(L)	ST-4501	ST-4503	
Lever Type		Dual Control Lever	Dual Control Lever	Dual Control Lever	Dual Control Lever	Dual Control Lever	Dual Control Lever	Dual Control Lever	
Shift Lever Specifications	Front	* (Double / Triple)	Double	Triple	-	* (Double / Triple)	Double	Triple	
	Rear	-	-	-	9	-	-	-	
	Optical Gear Display Unit	-	-	-	X	X	X	X	
	Flight Deck	With Gear Sensor	X	X	X	-	-	-	-
		Without Gear Sensor	-	-	-	-	-	-	-
	Multi-Bearing Construction	-	-	-	-	-	-	-	
	Outer Casing	Lever side	SP41	SP41	SP41	SP41	SP41	SP41	SP41
		RD side	SP41 Sealed	SP41 Sealed	SP41 Sealed	SP41 Sealed	SP41 Sealed	SP41 Sealed	SP41 Sealed
	Stainless Cable	X	X	X	X	X	X	X	
Clamp Band	-	-	-	-	-	-	-		
Brake Lever Specifications	Reach Adjust	-	-	-	Spacer Use	Spacer Use	Spacer Use	Spacer Use	
	Clamp Band	23.8mm / 24.2 mm	23.8mm / 24.2 mm	23.8mm / 24.2 mm	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	
	Super SLR	X	X	X	-	-	-	-	
Bracket	Material	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	
	Finish	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	Engineering Plastic	
Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	Clear Coated	
Note		Before running change	After running change	After running change		Before running change	After running change	After running change	

# Shift / Brake Lever (Road) Specifications

Series		Non-Series	Non-Series	Non-Series	SORA	2300	2300	A050	A050	
Model No.		ST-R500	SL-R400	BL-R400	ST-3400	ST-2300	ST-2303	SL-A050-7R	SL-A050-LN	
Lever Type		Dual Control Lever	Down Tube Shifter	Brake Lever	Dual Control Lever	Dual Control Lever	Dual Control Lever	Handle Bar Mount Shifter	Handle Bar Mount Shifter	
Shift Lever Specifications	Front	Double / Triple	Double / Triple	-	Double / Triple	Double	Triple	-	Double/Friction	
	Rear	8	8	-	9	8	-	7	-	
	Optical Gear Display Unit		-	-	-	X	-	-	-	-
	Flight Deck	With Gear Sensor	X	-	-	-	-	-	-	-
		Without Gear Sensor	-	-	-	-	-	-	-	-
	Multi-Bearing Construction		-	-	-	-	-	-	-	-
	Outer Casing	Lever side	SP41	-	-	SP41	SP40	SP40	SIS	SIS
		RD side	SP41 Sealed	SP41	-	SP41 Sealed	SP40 Sealed	-	SIS	SIS
	Stainless Cable		X	-	-	X	X	X	-	-
Clamp Band		-	-	-	-	-	-	25.6mm	25.6mm	
Brake Lever Specifications	Reach Adjust	-	-	-	Spacer Use	Spacer Use	Spacer Use	-	-	
	Clamp Band	23.8mm / 24.2mm	-	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	23.8mm / 24.2mm	-	-	
	Super SLR	X	-	X	-	-	-	-	-	
Bracket	Material	Engineering Plastic	-	Aluminum	Engineering Plastic	Engineering Plastic	Engineering Plastic	Steel	Steel	
	Finish	Engineering Plastic	-	Barrel	Engineering Plastic	Engineering Plastic	Engineering Plastic	Zinc Plated	Zinc Plated	
Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Resin	Resin	
	Finish	Clear Coated	Barrel	Anodized	Painted	Painted	Painted	Resin	Resin	
Note										

# Shift / Brake Lever (Road) Specifications

Series		Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	
Model No.		SL-SY20A-6-STEM	SL-SY20A-7-STEM	SL-SY20A-6-D	SL-SY20A-7-D	SL-SY20A-6-D/BAND	SL-SY20A-7-D/BAND	
Lever Type		Stem Mount Shifter	Stem Mount Shifter	Down Tube Mount Shifter	Down Tube Mount Shifter	Down Tube Mount Shifter	Down Tube Mount Shifter	
Shift Lever Specifications	Front	Double/Friction	Double/Friction	Double/Friction	Double/Friction	Double/Friction	Double/Friction	
	Rear	6	7	6	7	6	7	
	Optical Gear Display Unit		-	-	-	-	-	-
	Flight Deck	With Gear Sensor	-	-	-	-	-	-
		Without Gear Sensor	-	-	-	-	-	-
	Multi-Bearing Construction		-	-	-	-	-	-
	Outer Casing	Lever side	SIS	SIS	SIS	SIS	SIS	SIS
		RD side	SIS	SIS	SIS	SIS	SIS	SIS
	Stainless Cable		-	-	-	-	-	-
Clamp Band		22.2mm	22.2mm	22.2mm	22.2mm	28.6mm	28.6mm	
Brake Lever Specifications	Reach Adjust	-	-	-	-	-	-	
	Clamp Band	-	-	-	-	-	-	
	Super SLR	-	-	-	-	-	-	
Bracket	Material	Steel	Steel	Steel	Steel	Steel	Steel	
	Finish	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	Zinc Plated	
Lever	Material	Resin+Zinc Cap	Resin+Zinc Cap	Resin+Zinc Cap	Resin+Zinc Cap	Resin+Zinc Cap	Resin+Zinc Cap	
	Finish	Resin+CP(Pearl)	Resin+CP(Pearl)	Resin+CP(Pearl)	Resin+CP(Pearl)	Resin+CP(Pearl)	Resin+CP(Pearl)	
Note				Brazed On Type	Brazed On Type	Band Type	Band Type	

# Shift / Brake Lever (Road) Specifications

Series		Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	
Model No.		SL-R770	BL-R770	BL-R550-S	BL-R550-L	SL-R440	
Lever Type		Rapidfire Plus	Brake Lever	Brake Lever	Brake Lever	Rapidfire Plus	
Shift Lever Specifications	Front	Double / Triple	-	-	-	Double / Triple	
	Rear	10	-	-	-	9	
	Optical Gear Display Unit		Detachable/ Above handlebar	-	-	-	Detachable/ Above handlebar
	Flight Deck	With Gear Sensor	-	-	-	-	-
		Without Gear Sensor	-	-	-	-	*1
	Multi-Bearing Construction		2	-	-	-	-
	Outer Casing	Lever side	SP41	-	-	-	SP41
		RD side	SP41 Sealed	-	-	-	SP41 Sealed
	Stainless Cable		X	-	-	-	X
Clamp Band		22.2mm	-	-	-	22.2mm	
Brake Lever Specifications	Reach Adjust	-	Screw Adjust	Screw Adjust	Screw Adjust	-	
	Clamp Band	-	22.2mm	22.2mm	22.2mm	-	
	Super SLR	-	-	-	-	-	
Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Clear Coated	Clear Coated	Painted	Painted	Painted	
Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Steel+Resin	
	Finish	Clear Coated	Anodized	Anodized	Anodized	Black Plated	
Note		For flat handlebar	For Caliper/Canti/Roller/ Road disc brake (BR-R505)	Silver Version For Caliper/Canti/Roller/ Road disc brake (BR-R505)	Black Version For Caliper/Canti/Roller/Road disc brake (BR-R505)	For flat handlebar *1 SM-6500/6501- M available Left:SL-R441	

# Shift / Brake Lever (Road) Specifications

Series		Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	
Model No.		SL-R440-L	SL-R440-8	SL-R440-8-L	ST-R221	ST-R221-L	
Lever Type		Rapidfire Plus	Rapidfire Plus	Rapidfire Plus	EZ-fire Plus	EZ-fire Plus	
Shift Lever Specifications	Front	Double / Triple	Double / Triple	Double / Triple	Double	Double	
	Rear	9	8	8	8	8	
	Optical Gear Display Unit	Detachable/ Above handlebar	Detachable/ Above handlebar	Detachable/ Above handlebar	Dial type	Dial type	
	Flight Deck	With Gear Sensor	-	-	-	-	-
		Without Gear Sensor	*1	*1	*1	-	-
	Multi-Bearing Construction	-	-	-	-	-	
	Outer Casing	Lever side	SP41	SP41	SP41	SP40	SP40
		RD side	SP41 Sealed	SP41 Sealed	SP41 Sealed	SP40	SP40
	Stainless Cable	X	X	X	-	-	
Clamp Band	22.2mm	22.2mm	22.2mm	-	-		
Brake Lever Specifications	Reach Adjust	-	-	-	x	x	
	Clamp Band	-	-	-	22.2mm	22.2mm	
	Super SLR	-	-	-	-	-	
Bracket	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Painted	Painted	Painted	Painted	Painted	
Lever	Material	Steel+Resin	Steel	Steel	SL:Steel+Resin BL:Aluminum	SL:Steel+Resin BL:Aluminum	
	Finish	Black Plated	Black Plated	Black Plated	SL:Black Plated BL:Anodized	SL:Black Plated BL:Anodized	
Note		For flat handlebar *1 SM-6500/6501-M available Black Version Left:SL-R441-L	For flat handlebar*1 SM-6500/6501-M available Left:SL-R441	For flat handlebar *1 SM-6500/6501-M available Black Version Left:SL-R441-L	For flat handlebar	Black Version	
						For flat handlebar	
					Compatible with V-BRAKE/Canti/Caliper and Disc brake	Compatible with V-BRAKE/Canti/Caliper and Disc brake	

# Shift / Brake Lever (Road) Specifications

Series		Non-Series	Non-Series	Non-Series	Dura-Ace	
Model No.		ST-R225	ST-R225-L	BL-TT78	BL-TT79	
Lever Type		EZ-fire Plus	EZ-fire Plus	Brake Lever	Brake Lever	
Shift Lever Specifications	Front	Triple	Triple	-	-	
	Rear	-	-	-	-	
	Optical Gear Display Unit	Dial type	Dial type	-	-	
	Flight Deck	With Gear Sensor	-	-	-	-
		Without Gear Sensor	-	-	-	-
	Multi-Bearing Construction	-	-	-	-	
	Outer Casing	Lever side	SP40	SP40	-	-
		RD side	SP40	SP40	-	-
	Stainless Cable	-	-	-	-	
Clamp Band	-	-	-	-		
Brake Lever Specifications	Reach Adjust	x	x	x	x	
	Clamp Band	22.2mm	22.2mm	*2	*2	
	Super SLR	-	-	-	-	
Bracket	Material	Aluminum	Aluminum	Engineering Plastic	Engineering Plastic	
	Finish	Painted	Painted	Painted	Painted	
Lever	Material	SL:Steel+Resin BL:Aluminum	SL:Steel+Resin BL:Aluminum	Aluminum	Carbon	
	Finish	SL:Black Plated BL:Anodized	SL:Black Plated BL:Anodized	Anodized	-	
Note		Front Lever W/Trim	Front Lever W/Trim; Black Version	*2 : Fixiation structure is expanding plug clamp, handle bar inside diameter : 19.0-22.5 dim, handle bar outside diameter : 22.2-24.0 dim.		
		For flat handlebar	For flat handlebar			
		Compatible with V-BRAKE/Canti/Caliper and Disc brake	Compatible with V-BRAKE/Canti/Caliper and Disc brake			

# Brake (Road) Specifications









Series		Dura-Ace	Ultegra	105	105	Non-Series	Non-Series
Model No.		BR-7900	BR-6700	BR-5600-S	BR-5600-L	BR-R560	BR-R505
Type		Super SLR Dual Pivot	Super SLR Dual Pivot	Super SLR Dual Pivot	Super SLR Dual Pivot	Super SLR Dual Pivot	Disc-brake
Reach		49mm	49mm	49mm	49mm	49mm	-
Brake Shoe	Standard	R55C3	R55C3	R55C2	R55C2	R55C2	M06 Metal
	Optional Choice	R55C+1 R55C for carbon rim R55C for ceramic rim	R55C for carbon rim R55C for ceramic rim	-	-	-	-
Assembly Pivot Nut (mm)		10.5 / 12.5 / 18.0 / 25.0	10.5 / 12.5 / 18.0 / 25.0	10.5 / 12.5 / 18.0 / 25.0	10.5 / 12.5 / 18.0 / 25.0	10.5 / 12.5 / 18.0 / 25.0	-
Cartridge Shoe Holder		X	X	X	X	X	-
Tire Guide Bumpers		X	X	-	-	-	-
QR		X	X	X	X	X	-
Shoe Angle Adjusting		X	X	X	X	X	-
Spring Tension Adjusting		X	X	-	-	-	-
Cartridge Shoe Holder	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	-
	Finish	Anodized	Painted	Painted	Painted	Painted	-
C-arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	-
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	-
Y-arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	-
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	-
Gate	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	-
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	-
QR	Material	Aluminum	Aluminum	Zinc	Zinc	Zinc	-
	Finish	Plated	Painted	Pearl Bright Plated	Pearl Bright Plated	Pearl Bright Plated	-
Titanium Cable Fixing Bolt		X	-	-	-	-	-
Titanium Pivot Bolt		X	-	-	-	-	-
Note				Silver version	Slate Black version	Silver	*Please refer to Disc BR(caliper) Page

# Brake (Road) Specifications









Series		Non-Series	TIAGRA	SORA	Non-Series	Non-Series
Model No.		BR-R550	BR-4500	BR-3400	BR-R650	BR-R450
Type		Canti-brake	Super SLR Dual Pivot	Super SLR Dual Pivot	Super SLR Dual Pivot	Super SLR Dual Pivot
Reach		49mm	49mm	49mm	57mm	57mm
Brake Shoe	Standard	S70C(severe condition)	R50T2	R50T2	R55C2	R50T2
	Optional Choice	M70R2(severe condition) M70CT4(severe condition)	-	-	R55C for carbon rim R55C for ceramic rim	-
Assembly Pivot Nut (mm)		16 / 25	10.5 / 12.5 / 18.0 / 25.0	10.5/ 12.5/ 18.0/25.0	10.5 / 12.5 / 18.0 / 25.0	10.5/ 12.5/ 18.0/25.0
Cartridge Shoe Holder		X	-	-	X	-
Tire Guide Bumpers		-	-	-	X	-
QR		-	X	X	X	X
Shoe Angle Adjusting		X	X	X	X	X
Spring Tension Adjusting		X	-	-	-	-
Cartridge Shoe Holder	Material	Aluminum	-	-	Aluminum	-
	Finish	Painted	-	-	Painted	-
C-arm	Material	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	-	Anodized	Painted	Anodized	Painted
Y-arm	Material	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	-	Anodized	Painted	Anodized	Painted
Gate	Material	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	-	Anodized	Painted	Anodized	Painted
QR	Material	-	Zinc	Resin	Aluminum	Resin
	Finish	-	Pearl Bright Plated	-	Painted	-
Titanium Cable Fixing Bolt		-	-	-	-	-
Titanium Pivot Bolt		-	-	-	-	-
Note						






# Front Chainwheel (Road) Specifications

Series		Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace(Track)	ULTEGRA	ULTEGRA	ULTEGRA	Ultegra
Model No.		FC-7900	FC-7950	FC-7800-C	FC-7710	FC-6700	FC-6703	FC-6750	FC-6600
Rear Speeds		10	10	10	Single	10	10	10	10
Chainring Combination		53-42T 52-39T 53-39T 54-42T 55-42T 56-44T	50-34T	52-39T 53-39T	45T>>55T (1/2"X1/8") 45T>>55T (1/2"X3/32")	52-39T 53-39T	52-39-30T	50-34T	52-39T 53-39T
PCD		130mm	110mm	130mm	144mm	130mm	130mm / 92mm	110mm	130mm
Splined Crank		X	X	X	X	X	X	X	X
Crank Arm Length	160.0mm	-	-	-	-	-	-	-	-
	162.5mm	-	-	-	-	-	-	-	-
	165mm	X	X	-	X	X	X	X	X
	167.5mm	X	X	-	X	-	-	-	-
	170mm	X	X	-	X	X	X	X	X
	172.5mm	X	X	X	X	X	X	X	X
	175mm	X	X	X	X	X	X	X	X
	177.5mm	X	X	-	-	-	-	-	-
180mm	X	X	-	-	-	-	-	-	
Chain		Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	1/2"X1/8" 1/2"X3/32"	Supre Narrow HG for 10-speed	Supre Narrow HG for 10-speed	Supre Narrow HG for 10-speed	Super Narrow HG for 10-speed
Bottom Bracket	Model No.	SM-BB7900	SM-BB7900	SM-FC7801	BB-7710 / 7700	SM-BB6700	SM-BB6700	SM-BB6700	Included*
	Chain Line	43.5mm	X	X	109.5	X	-	X	X
		45mm	-	-	-	-	-	X	-
Optional Chain Guard		-	-	-	-	-	-	-	-
Hollowtech II technology		X 	X 	X 	-	X 	X 	X 	X 
2-piece Solid Crank Construction		-	-	-	-	-	-	-	-
Hollowtech Crank Arm		X	X	X	X 	X	X	X	X
OCTALINK technology		-	-	-	X	-	-	-	-
One Key Release		-	-	-	X	-	-	-	-
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
Top Gear	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Nickel Plated	Anodized	Anodized	Anodized	Anodized
Middle Gear	Material	-	-	-	-	-	Aluminum	-	-
	Finish	-	-	-	-	-	Anodized	-	-
Low Gear	Material	Aluminum	Aluminum	Aluminum	-	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	-	Anodized	Anodized	Anodized	Anodized
Note					CL=42.5mm				silver version *Individual package (SM-FC6600) is available for after market.

## Front Chainwheel (Road) Specifications

Series		Ultegra	Ultegra	Ultegra	Ultegra	Ultegra	105	105	105	
Model No.		FC-6601-G	FC-6603	FC-6604-G	FC-6650-S	FC-6650-G	FC-5600-S	FC-5600-L	FC-5603-S	
Rear Speeds		10	10	10	10	10	10	10	10	
Chainring Combination		52-39T 53-39T	52-39-30T	52-39-30T	50-34T	50-34T	52-39T 53-39T 50-39T	52-39T 53-39T 50-39T	50-39-30T	
PCD		130mm	130mm/74mm	130mm/74mm	110mm	110mm	130mm	130mm	130mm/74mm	
Splined Crank		X	X	X	X	X	X	X	X	
Crank Arm Length		160.0mm	-	-	-	-	-	-	-	
		162.5mm	-	-	-	-	-	-	-	
		165mm	X	X	X	X	X	X	X	X
		167.5mm	-	-	-	-	-	-	-	-
		170mm	X	X	X	X	X	X	X	X
		172.5mm	X	X	X	X	X	X	X	X
		175mm	X	X	X	X	X	X	X	X
		177.5mm	-	-	-	-	-	-	-	-
180mm		-	-	-	-	-	-	-	-	
Chain		Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	
Bottom Bracket	Model No.	Included*	Included*	Included*	Included*	Included*	Included*	Included*	Included*	
	Chain Line	43.5mm	X	-	-	X	X	X	X	-
		45mm	-	X	X	-	-	-	-	X
Optional Chain Guard		-	-	-	-	-	-	-	-	
Hollowtech II technology		X 	X 	X 	X 	X 	X 	X 	X 	
2-piece Solid Crank Construction		-	-	-	-	-	-	-	-	
Hollowtech Crank Arm		X	X	X	X	X	X	X	X	
OCTALINK technology		-	-	-	-	-	-	-	-	
One Key Release		-	-	-	-	-	-	-	-	
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	
Top Gear	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	
Middle Gear	Material	-	Aluminum	Aluminum	-	-	-	-	Aluminum	
	Finish	-	Anodized	Anodized	-	-	-	-	Anodized	
Low Gear	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	
Note		Ice Gray version *Individual package (SM-FC6601) is available for after market.	silver version *Individual package (SM-FC6600) is available for after market.	Ice Gray version *Individual package (SM-FC6601) is available for after market.	silver version *Individual package (SM-FC6601) is available for after market.	Ice Gray version *Individual package (SM-FC6601) is available for after market.	Silver version *Individual package (SM-FC5600) is available for after market.	Slate Black version *Individual package (SM-FC5600) is available for after market.	Silver version *Individual package (SM-FC5600) is available for after market.	

## Front Chainwheel (Road) Specifications

Series		105	105	105	Non-Series	Non-Series	Non-Series	TIAGRA	
Model No.		FC-5603-L	FC-5650-S	FC-5650-L	FC-R600	FC-R550	FC-R553	FC-4500	
Rear Speeds		10	10	10	10	10	10	9	
Chainring Combination		50-39-30T	50-34T	50-34T	50-34T	52-39T 53-39T 50-39T	50-39-30T	52-39T	
PCD		130mm/74mm	110mm	110mm	110mm	130mm	130mm/74mm	130mm	
Splined Crank		X	X	X	X	X	X	X	
Crank Arm Length	160.0mm	-	-	-	-	-	-	-	
	162.5mm	-	-	-	-	-	-	-	
	165mm	X	X	X	X	X	X	X	
	167.5mm	-	-	-	-	-	-	-	
	170mm	X	X	X	X	X	X	X	
	172.5mm	X	X	X	X	X	X	-	
	175mm	X	X	X	X	X	X	X	
	177.5mm	-	-	-	-	-	-	-	
180mm	-	-	-	-	-	-	-		
Chain		Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 9-speed	
Bottom Bracket	Model No.	Included*	Included*	Included*	Included*	Included*	Included*	Included*	
	Chain Line	43.5mm	-	X	X	X	X	-	X
		45mm	X	-	-	-	-	X	-
Optional Chain Guard		-	-	-	-	-	-	-	
Hollowtech II technology		X 	X 	X 	-	-	-	-	
2-piece Solid Crank Construction		-	-	-	X	X	X	X	
Hollowtech Crank Arm		X	X	X	-	-	-	-	
OCTALINK technology		-	-	-	-	-	-	-	
One Key Release		-	-	-	-	-	-	-	
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	
Top Gear	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	
Middle Gear	Material	Aluminum	-	-	-	-	Aluminum	-	
	Finish	Anodized	-	-	-	-	Anodized	-	
Low Gear	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized	
Note		Slate Black version *Individual package (SM-FC5600) is available for after market.	Silver version *Individual package (SM-FC5600) is available for after market.	Slate Black version *Individual package (SM-FC5600) is available for after market.	*Individual package (SM-FC4500) is available for after market. Shimano Logo	*Individual package (SM-FC4500) is available for after market.	*Individual package (SM-FC4500) is available for after market.	*Individual package (SM-FC4500) is available for after market.	

## Front Chainwheel (Road) Specifications

Series		TIAGRA	TIAGRA	Non-Series	SORA	SORA	2300	2300
Model No.		FC-4503	FC-4550	FC-4550-S	FC-3450	FC-3403	FC-2300	FC-2303
Rear Speeds		9	9	9	9	9	8	8
Chainring Combination		50-39-30T	50-34T	50-34T	50-34T	50-39-34T	52-39T	52-42-30T
PCD		130mm/74mm	110mm	110mm	110mm	130mm / 74mm	130mm	130mm / 74mm
Splined Crank		X	X	X	X	X	-	-
Crank Arm Length	160.0mm	-	-	-	-	-	-	-
	162.5mm	-	-	-	-	-	-	-
	165mm	X	X	X	X	X	-	-
	167.5mm	-	-	-	-	-	-	-
	170mm	X	X	X	X	X	X	X
	172.5mm	-	-	-	-	-	-	-
	175mm	X	X	X	X	X	X	X
	177.5mm	-	-	-	-	-	-	-
Chain		Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	HG	HG
Bottom Bracket	Model No.	Included*	Included*	Included*	Included*	Included*	BB-UN26	BB-UN26
	Chain Line	43.5mm	-	X	X	X	MM110	-
		45mm	X	-	-	-	-	LL113
Optional Chain Guard		-	-	-	-	-	X	X
Hollowtech II technology		-	-	-	-	-	-	-
2-piece Solid Crank Construction		X	X	X	X	X	-	-
Hollowtech Crank Arm		-	-	-	-	-	-	-
OCTALINK technology		-	-	-	-	-	-	-
One Key Release		-	-	-	-	-	-	-
Crank Arm	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminium	Aluminium
	Finish	Anodized	Anodized	Anodized	Painted	Painted	Painted	Painted
Top Gear	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Steel	Steel
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Painted	Painted
Middle Gear	Material	Aluminum	-	-	-	Steel	-	Steel
	Finish	Anodized	-	-	-	Plated	-	Painted
Low Gear	Material	Steel	Aluminum	Aluminum	steel	Steel	Steel	Steel
	Finish	Plated	Anodized	Anodized	Plated	Plated	Painted	Painted
Note		*Individual package (SM-FC4500) is available for after market.	*Individual package (SM-FC4500) is available for after market. TIAGRA Logo and TIAGRA Color	*Individual package (SM-FC4500) is available for after market. Shimano Logo and Silver Anodized	*Individual package (SM-FC4500) is available for after market. Shimano Logo and Silver Anodized	*Individual package (SM-FC4500) is available for after market. Shimano Logo and Silver Anodized		

## Front Chainwheel (Road) Specifications

Series		Non-Series	Non-Series	A050
Model No.		FC-R450	FC-R453	FC-A050
Rear Speeds		9	9	7/8
Chainring Combination		52-39T	50-39-30T	52-39T 50-39T
PCD		130mm	130mm/74mm	130mm
Splined Crank		X	X	-
Crank Arm Length	160.0mm	-	-	X
	162.5mm	-	-	-
	165mm	-	-	-
	167.5mm	-	-	-
	170mm	X	X	X
	172.5mm	-	-	-
	175mm	X	X	-
	177.5mm	-	-	-
Chain		Super Narrow HG for 9-speed	Super Narrow HG for 9-speed	HG
Bottom Bracket	Model No.	BB-ES25	BB-ES25	BB-UN26
	Chain Line	43.5mm	113mm	MM110
		45mm	-	121mm
Optional Chain Guard		X	X	X
Hollowtech II technology		-	-	-
2-piece Solid Crank Construction		-	-	-
Hollowtech Crank Arm		-	-	-
OCTALINK technology		X	X	-
One Key Release		-	-	-
Crank Arm	Material	Aluminum	Aluminum	Aluminum
	Finish	Painted	Painted	Polished
Top Gear	Material	Aluminum	Aluminum	Steel
	Finish	Anodized	Anodized	Painted
Middle Gear	Material	-	Steel	-
	Finish	-	Plated	-
Low Gear	Material	Steel	Steel	Steel
	Finish	Plated	Plated	Painted
Note				

## Bottom Bracket (Road) Specifications

Series Name				Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace(Track)	Dura-Ace	Ultegra	Ultegra	Ultegra
Model No.				SM-BB7900	SM-FC7801	BB-7700	BB-7710	BB-7703	SM-BB6700	SM-FC6601	SM-FC6600
Applicable Front Chainwheel				FC-7900/7950	FC-7800-C	FC-7710	FC-7710	FC-7703	FC-6700/6703	FC-6601/6604	FC-6600/6603/R700
Hollow Pipe				X	X	X	X	X	X	X	X
Cartridge Type				-	-	-	X	X	-	-	-
Splined Crank Arm Mounts				X	X	X	X	X	X	X	X
Axle Length	Hollowtech II Construction	68mm	(BC1.37)	X	X	-	-	-	X	X	X
		70mm	(M36)	X	X	-	-	-	X	X	X
	109.5 mm	68mm	(BC1.37)	-	-	X	X	-	-	-	-
		70mm	(M36)	-	-	X	-	-	-	-	-
	118.5 mm	68mm	(BC1.37)	-	-	-	-	X	-	-	-
		70mm	(M36)	-	-	-	-	X	-	-	-
	113 mm	68mm	(BC1.37)	-	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-	-
	118 mm	68mm	(BC1.37)	-	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-	-
	MM107	68mm	(BC1.37)	-	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-	-
	MM110	68mm	(BC1.37)	-	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-	-
	LL113	68mm	(BC1.37)	-	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-	-
	D-H (115mm)	68mm	(BC1.37)	-	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-	-
	XL118	68mm	(BC1.37)	-	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-	-
D-NL (122.5mm)	68mm	(BC1.37)	-	-	-	-	-	-	-	-	
	70mm	(M36)	-	-	-	-	-	-	-	-	
Note					lighter version than SM-FC7800						

## Bottom Bracket (Road) Specifications

Series Name				105	TIAGRA	SORA (Double)	SORA (Triple)	2300 (Double)	2300 (Triple)	A050
Model No.				SM-FC5600	SM-FC4500	BB-ES25	BB-ES25	BB-UN26	BB-UN26	BB-UN26
Applicable Front Chainwheel				FC-5600/5603/5650	FC-4500/4503/4550/ R600/R550/R553	FC-R450	FC-R453	FC-2300	FC-2303	FC-A050
Hollow Pipe				X	X	X	X	-	-	-
Cartridge Type				-	-	X	X	X	X	X
Splined Crank Arm Mounts				X	X	X	X	-	-	-
Axle Length	Hollowtech II Construction	68mm	(BC1.37)	X	X	-	-	-	-	-
		70mm	(M36)	X	X	-	-	-	-	-
	109.5 mm	68mm	(BC1.37)	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-
	118.5 mm	68mm	(BC1.37)	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-
	113 mm	68mm	(BC1.37)	-	-	X	-	-	-	-
		70mm	(M36)	-	-	X	-	-	-	-
	118 mm	68mm	(BC1.37)	-	-	-	X	-	-	-
		70mm	(M36)	-	-	-	X	-	-	-
	MM107	68mm	(BC1.37)	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-
	MM110	68mm	(BC1.37)	-	-	-	-	X	-	X
		70mm	(M36)	-	-	-	-	X	-	X
	LL113	68mm	(BC1.37)	-	-	-	-	-	X	-
		70mm	(M36)	-	-	-	-	-	X	-
	D-H (115mm)	68mm	(BC1.37)	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-
	XL118	68mm	(BC1.37)	-	-	-	-	-	-	-
		70mm	(M36)	-	-	-	-	-	-	-
D-NL (122.5mm)	68mm	(BC1.37)	-	-	-	-	-	-	-	
	70mm	(M36)	-	-	-	-	-	-	-	
Note										

# Freehub (Road) Specifications

Series		Dura-Ace	Ultegra	105	105	Non-Series	TIAGRA
Model No.		FH-7900	FH-6700	FH-5600-S	FH-5600-L	FH-R505	FH-4500
Spoke Hole	20H	-	-	-	-	-	-
	24H	X	-	-	-	-	-
	28H	X	-	-	-	-	-
	32H	X	X	X	X	X	X
	36H	X	X	X	X	X	X
	Aero spoke	24/28H	-	-	-	-	-
	Hole PCD	Left 44mm Right 45mm	45mm	45mm	45mm	45mm	45mm
Freehub Body	Speeds	8/9/10	8/9/10	8/9/10	8/9/10	8/9/10	8/9
	11T Compatible	X	X	X	X	X	X
O.L.D.		130mm	130mm	130mm	130mm	135mm	130mm
Flange Distance		58.0	59.2	59.2	59.2	57.4mm	57.9
Dish		7.9	8.8	8.8	8.8	6.7	8.4
Axle	QR Skewer Length	163mm	163mm	163mm	163mm	168mm	163mm
	Length	141mm	141mm	141mm	141mm	146mm	141mm
	Material	Aluminum	Steel	Steel	Steel	Steel	Steel
Seal		Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact
Freehub Body	Material	Titanium	Steel	Steel	Steel	Steel	Steel
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
CBN (Cubic Boron Nitride)	Cone Races	X	X	X	X	X	X
	Cup Races	X	-	-	-	-	-
Easy Adjust System		X	-				
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
Note		*Super Finishing/Quick engagement			Slate Black version	For Disc Brake/Center lock mount	



## Freehub (Road) Specifications

Series		2200	2200
Model No.		FH-2200	FH-2200-L
Spoke Hole	20H	-	-
	24H	-	-
	28H	-	-
	32H	X	X
	36H	X	X
	Aero spoke	-	-
	Hole PCD	45mm	45mm
Freehub Body	Speeds	8/9	8/9
	11T Compatible	X	X
O.L.D.		130mm	130mm
Flange Distance		57.9	57.9
Dish		8.6	8.6
Axle	QR Skewer Length	163mm	163mm
	Length	141mm	141mm
	Material	Steel	Steel
Seal		Single Contact	Single Contact
Freehub Body	Material	Steel	Steel
Hub Shell	Material	Aluminum	Aluminum
	Finish	Machined	Anodized
CBN (Cubic Boron Nitride)	Cone Races	-	-
	Cup Races	-	-
Easy Adjust System			
QR Lever	Material	Steel	Steel
	Finish	Chrome Plated	Black Chrome Plated
Note			

# Front Hub (Road) Specifications

Series		Dura-Ace	Dura-Ace(Track)	Dura-Ace	Ultegra
Model No.		HB-7900	HB-7710	HB-7600	HB-6700
Spoke Hole	24H	X	-	-	-
	28H	X	X	X	-
	32H	X	X	X	X
	36H	X	X	X	X
	Aero Spoke	18/24/28/32H	-	-	-
	Hole PCD	40mm	38mm (Front) 44mm (Rear)	67mm	38mm
O.L.D.		100mm	100mm(Front) 120mm(Rear)	100mm(Front) 120mm(Rear)	100mm
Flange Distance		74.0	F:74.0 *R(Single Thread):72.5 (Double Thread):67.0	F:72.3 *R(Single Thread):75.5 (Double Thread):65.0	71.6
Axle	QR Skewer Length	133mm	-	-	133mm
	Length	108mm	142mm(M9) (Front) 164mm(M10) (Rear)	142mm(M9) (Front) 164mm(M10) (Rear)	108mm(M9)
	Material	Aluminum	Steel	Steel	Steel
Seal		Labyrinth and Contact	Dust Cap	Dust Cap	Labyrinth and Contact
CBN (Cubic Boron Nitride)	Cone Races	X*	X	X	X
	Cup Races	X*	X	X	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized
Easy Adjust System		X	-	-	-
QR Lever	Material	Aluminum	-	-	Aluminum
	Finish	Anodized	-	-	Anodized
Radial Lacing		X	-	-	X
Note		*Super Finishing	*Dishing Distance R(Single Thread):2.75mm (Double Thread):0		

# Front Hub (Road) Specifications

Series		105	105	Non-Series	TIAGRA	2200
Model No.		HB-5600-S	HB-5600-L	HB-R505	HB-4500	HB-2200
Spoke Hole	24H	-	-	-	-	-
	28H	-	-	-	-	-
	32H	X	X	X	X	X
	36H	X	X	X	X	X
	Aero Spoke	-	-	-	-	-
	Hole PCD	38mm	38mm	44mm	38mm	38mm
O.L.D.		100mm	100mm	100mm	100mm	100mm
Flange Distance		71.6	71.6	60.2	71.6	71.6
Axle	QR Skewer Length	133mm	133mm	133mm	133mm	129/133mm
	Length	108mm(M10)	108mm(M10)	108mm(M10)	108mm(M9)	108mm(M9)
	Material	Steel	Steel	Steel	Steel	Steel
Seal		Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Single Contact
CBN (Cubic Boron Nitride)	Cone Races	X	X	X	X	-
	Cup Races	-	-	-	-	-
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Machined
Easy Adjust System		-	-	-	-	-
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Steel
	Finish	Anodized	Anodized	Anodized	Anodized	Chrome Plated
Radial Lacing		X	X	X	X	-
Note			Slate Black version	For Disc Brake/Center lock mount		

## Front Hub (Road) Specifications

<b>Series</b>		<b>2200</b>
<b>Model No.</b>		<b>HB-2200-L</b>
<b>Spoke Hole</b>	<b>24H</b>	-
	<b>28H</b>	-
	<b>32H</b>	X
	<b>36H</b>	X
	<b>Aero Spoke</b>	-
	<b>Hole PCD</b>	38mm
<b>O.L.D.</b>		100mm
<b>Flange Distance</b>		71.6
<b>Axle</b>	<b>QR Skewer Length</b>	129/133mm
	<b>Length</b>	108mm(M9)
	<b>Material</b>	Steel
<b>Seal</b>		Single Contact
<b>CBN (Cubic Boron Nitride)</b>	<b>Cone Races</b>	-
	<b>Cup Races</b>	-
<b>Hub Shell</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Anodized
<b>Easy Adjust System</b>		-
<b>QR Lever</b>	<b>Material</b>	Steel
	<b>Finish</b>	Black Chrome Plated
<b>Radial Lacing</b>		-
<b>Note</b>		

# Cassette Sprocket (Road) Specifications

Series		Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace	Dura-Ace	Ultegra
Model No.		CS-7900	CS-7900	CS-7900	CS-7900	CS-7900	CS-7900	CS-7900	CS-7900	CS-6700
Speeds		10	10	10	10	10	10	10	10	10
Type		HG	HG	HG	HG	HG	HG	HG	HG	HG
Combination	10	21	23	25	27	28	23	25	27	23
	9	19	21	23	24	24	21	23	24	21
	8	18	19	21	21	21	19	21	21	19
	7	17	17	19	19	19	18	19	19	17
	6	16	16	17	17	17	17	17	17	16
	5	15	15	15	15	15	16	16	16	15
	4	14	14	14	14	14	15	15	15	14
	3	13	13	13	13	13	14	14	14	13
	2	12	12	12	12	12	13	13	13	12
1	11	11	11	11	11	12	12	12	11	
Group		-	-	-	-	-	-	-	-	-
Chain		Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed
Spider Arm		2	2	2	2	2	2	2	2	1
Aluminum Lock Ring		X	X	X	X	X	X	X	X	X
Material	Steel	11-16T	11-16T	11-17T	11-17T	11-17T	12-17T	12-17T	12-17T	11-23T
	Titanium	17-18-19-21T	17-19-21-23T	19-21-23-25T	19-21-24-27T	19-21-24-28T	19-21-23-25T	19-21-23-25T	19-21-24-27T	-
Finish		Ni-plated & Titanium	Ni-plated & Titanium	Ni-plated & Titanium	Ni-plated & Titanium	Ni-plated & Titanium	Ni-plated & Titanium	Ni-plated & Titanium	Ni-plated & Titanium	Ni-plated
Note										

# Cassette Sprocket (Road) Specifications

Series		Ultegra	Ultegra	Ultegra	Ultegra	Ultegra	Ultegra	Ultegra	Ultegra	Ultegra
Model No.		CS-6700	CS-6700	CS-6700	CS-6700	CS-6600	CS-6600	CS-6600	CS-6600	CS-6600
Speeds		10	10	10	10	10	10	10	10	10
Type		HG	HG	HG	HG	HG	HG	HG	HG	HG
Combination	10	23	25	25	28	23	23	25	27	25
	9	21	23	23	24	21	21	23	24	23
	8	19	21	21	21	19	19	21	21	21
	7	18	19	19	19	17	18	19	19	19
	6	17	17	17	17	16	17	17	17	18
	5	16	16	15	15	15	16	16	16	17
	4	15	15	14	14	14	15	15	15	16
	3	14	14	13	13	13	14	14	14	15
	2	13	13	12	12	12	13	13	13	14
1	12	12	11	11	11	12	12	12	13	
Group						-	-	-	-	-
Chain		Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed
Spider Arm		1	1	1	1	1	1	1	1	1
Aluminum Lock Ring		X	X	X	X	-	-	-	-	-
Material	Steel	12-23T	12-25T	11-25T	11-28T	11-23T	12-23T	12-25T	12-27T	13-25T
	Titanium	-	-	-	-	-	-	-	-	-
Finish		Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated
Note										Not compatible with FH-7801 /WH-7801

# Cassette Sprocket (Road) Specifications

Series		Ultegra	Ultegra	Ultegra	105	105	105	105	TIAGRA SORA	TIAGRA SORA	TIAGRA SORA
Model No.		CS-6600	CS-6600	CS-6600	CS-5600	CS-5600	CS-5600	CS-5600	CS-HG50-9	CS-HG50-9	CS-HG50-9
<b>Speeds</b>		10	10	10	10	10	10	10	9	9	9
<b>Type</b>		HG	HG	HG	HG	HG	HG	HG	HG	HG	HG
<b>Combination</b>	<b>10</b>	25	25	27	25	23	25	27	-	-	-
	<b>9</b>	23	23	25	23	21	23	24	25	23	25
	<b>8</b>	21	22	23	21	19	21	21	23	21	23
	<b>7</b>	20	21	22	19	17	19	19	21	19	21
	<b>6</b>	19	20	21	17	16	17	17	19	17	19
	<b>5</b>	18	19	20	15	15	16	16	17	16	17
	<b>4</b>	17	18	19	14	14	15	15	15	15	15
	<b>3</b>	16	17	18	13	13	14	14	13	14	14
	<b>2</b>	15	16	17	12	12	13	13	12	13	13
<b>1</b>	14	15	16	11	11	12	12	11	12	12	
<b>Group</b>		-	-	-	-	-	-	-	-	-	-
<b>Chain</b>		Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 10-speed	Super narrow HG for 9-speed	Super narrow HG for 9-speed	Super narrow HG for 9-speed
<b>Spider Arm</b>		1	1	1	1	1	1	1	-	-	-
<b>Aluminum Lock Ring</b>		-	-	-	-	-	-	-	-	-	-
<b>Material</b>	<b>Steel</b>	14-25T	15-25T	16-27T	11-25T	11-23T	12-25T	12-27T	11-25T	12-23T	12-25T
	<b>Titanium</b>	-	-	-	-	-	-	-	-	-	-
<b>Finish</b>		Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated
<b>Note</b>		*Not compatible with FH-7801 /WH-7801 *RD:Use SS cage only	*Not compatible with FH-7801 /WH-7801 *RD:Use SS cage only	*Not compatible with FH-7801 /WH-7801 *RD:Use SS cage only							

# Cassette Sprocket (Road) Specifications

Series		TIAGRA SORA	TIAGRA SORA	2200	2200	2200	2200	2200
Model No.		CS-HG50-9	CS-HG50-9	CS-HG50-8	CS-HG50-8	CS-HG50-8	CS-HG50-8	CS-HG50-8
<b>Speeds</b>		9	9	8	8	8	8	8
<b>Type</b>		HG	HG	HG	HG	HG	HG	HG
<b>Combination</b>	10	-	-	-	-	-	-	-
	9	25	25	-	-	-	-	-
	8	23	23	21	23	25	23	26
	7	21	21	19	21	23	21	23
	6	19	19	17	19	21	19	21
	5	17	18	16	17	19	17	19
	4	16	17	15	15	17	16	17
	3	15	16	14	14	15	15	15
	2	14	15	13	13	13	14	14
1	13	14	12	12	12	13	13	
<b>Group</b>		-	-	S	U	W	T	V
<b>Chain</b>		Super narrow HG for 9-speed	Super narrow HG for 9-speed	HG	HG	HG	HG	HG
<b>Spider Arm</b>		-	-	-	-	-	-	-
<b>Aluminum Lock Ring</b>		-	-	-	-	-	-	-
<b>Material</b>	Steel	13-25T	14-25T	12-21T	12-23T	12-25T	13-23T	13-26T
	Titanium	-	-	-	-	-	-	-
<b>Finish</b>		Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated	Ni-plated
<b>Note</b>								



# Chain (Road) Specifications

## Chain

Series	Dura-Ace	Dura-Ace	Ultegra	Ultegra	105	TIAGRA	2200	2200	A050
Model No.	CN-7900	CN-7801	CN-6700	CN-6600	CN-5600	CN-HG53	CN-HG50	CN-HG40	CN-UG51
Type	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 10-speed	Super Narrow HG for 9-speed	HG	HG	UG
Pin Link Plate	Zinc-Alloy Plated	Zinc-Alloy plated	Zinc-Alloy Plated	Zinc-Alloy Plated	Grey	Grey	Black	Grey	Grey
Roller Link Plate	Zinc-Alloy Plated	Zinc-Alloy plated	Grey	Grey	Grey	Brown	Black	Black	Black
Chromizing Treatment Link Pin	X	X	X	X	X	X	X	-	-
Perforated plate	X	-	X	-	-	-	-	-	-
Note	Hollow Link Pin; SM-CN79 equipped		SM-CN79 equipped						

## Quick Link

Model No.	SM-CN79
Type	Quick Link for 10-speed chain
Compatibility	CN-7900, CN6700, CN-7801 CN-6600, CN-5600
Link Plate	Zinc-Alloy plated
Link Pin	Gray

## Head Parts (Road) Specifications

<b>Series</b>		<b>Dura-Ace</b>
<b>Model No.</b>		<b>HP-7410</b>
<b>Size</b>		JIS ENGLISH
<b>Thread</b>		BC1"x24T.PT.I.
<b>Sealed Cartridge Bearings</b>		X
<b>Stack Height</b>		37.6mm
<b>Lock Nut</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Anodized
<b>Upper/Lower Cups</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Anodized
<b>Upper Stem Cone</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Anodized
<b>Stem Cone</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Anodized
<b>Note</b>		

# Wheel Specifications (MTB)

Model No.		WH-M975 (front)	WH-M975 (rear)	WH-M970 (front)	WH-M970 (rear)	WH-MT75 (front)	WH-MT75 (rear)
Freehub Body	Speeds	-	8/9	-	8/9	-	8/9
	11T Compatible	-	X	-	X	-	X
	Quick Engagement	-	X	-	X	-	X
	Material	-	Titanium	-	Titanium	-	Steel
O.L.D.		100mm	135mm	100mm	135mm	100mm	135mm
Hub Axle	QR	X	X	X	X	X	X
	Length	108mm	146mm	108mm	146mm	108mm	146mm
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized
	Seal	Contact	Contact	Contact	Contact	Contact	Contact
	Center Lock Rotor Mount	X	X	-	-	X	X
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
	QR Skewer Length	133mm	168mm	133mm	168mm	133mm	168mm
Rim	Type	UST	UST	UST	UST	UST	UST
	Size	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")	622 X 19C (29")	622 X 19C (29")
	Offset rim	-	-	-	X	-	-
	Welded joint	X	X	X	X	X	X
	Material	Scandium alloy	Scandium alloy	Scandium alloy	Scandium alloy	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
	Height/Width	21mm/23.3mm	21mm/23.3mm	21mm/23.1mm	21mm/23.1mm	21mm/23.3mm	21mm/23.3mm
	Brazed reinforcement	X	X	X	X	X	X
	Requires rim tape	-	-	-	-	-	-
Brake type	Disc	Disc	Rim	Rim	Disc	Disc	
Spokes	No. of Spokes	24	24	20	24	24	24
	Gauge/Shape	Butted (2.0-1.5-2.0)/Round	Butted (2.0-1.5-2.0)/Round	Butted (2.0-1.5-2.0)/Round	Butted (2.0-1.5-2.0)/Round	Butted (2.0-1.8-2.0)/Round	Butted (2.0-1.8-2.0)/Round
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Black	Black	Black	Black	Black	Black
Nipple	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Color	Red	Red	Red	Red	Red	Red
Spoke Protector (Option)		-	CP-WH14/15	-	CP-WH14/15	-	CP-WH14/15
Reflector (Option)		CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)		CAT EYE : RR-550-WUW/W SMN 03 (CPSC/JIS/BS), RR-550-WUA/A SMN03 (AS), RR-317-WUA/4K SMN03 (DIN)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)	
Weight *		1525g/pair (Front:697g,Rear:828g)		1512g/pair (Front:676g,Rear:836g)		1831g/pair (Front:832g,Rear:999g)	
Note		Recommended Tire width:1.50-2.25		Recommended Tire width:1.50-2.25		Recommended Tire width:1.50-2.25	
		* Weight does not include quick release or valve stem.		* Weight does not include quick release or valve stem.		* Weight does not include quick release or valve stem.	

# Wheel Specifications (MTB)

Model No.	WH-MT65(front)	WH-MT65(rear)	WH-MT15(front)	WH-MT15(rear)	WH-M778 (front)	
Freehub Body	Speeds	-	8/9	-	8/9	-
	11T Compatible	-	X	-	X	-
	Quick Engagement	-	X	-	-	-
	Material	-	Steel	-	Steel	-
O.L.D.	100mm	135mm	100mm	135mm	100mm	
Hub Axle	QR	X	X	X	X	N/A (15mm thru axle)
	Length	108mm	146mm	108mm	146mm	-
	Material	Aluminum	Aluminum	Steel	Steel	Aluminum
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Shot / Anodized	Shot / Anodized	Buffed / Shot / Anodized
	Seal	Contact	Contact	Contact	Contact	Contact
	Center Lock Rotor Mount	X	X	X	X	X
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	-
	Finish	Anodized	Anodized	Anodized	Anodized	-
	QR Skewer Length	133mm	168mm	133mm	168mm	-
Rim	Type	UST	UST	Clincher	Clincher	UST
	Size	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")
	Offset rim	-	-	-	-	-
	Welded joint	X	X	-	-	X
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized
	Height/Width	21mm/23.3mm	21mm/23.3mm	21mm/24.6mm	21mm/24.6mm	21mm/23.3mm
	Brazed reinforcement	X	X	-	-	X
	Requires rim tape	-	-	X	X	-
Brake type	Disc	Disc	Disc	Disc	Disc	
Spokes	No. of Spokes	24	24	28	28	24
	Gauge/Shape	2.0-1.8-2.0/ Straight pull,Round	2.0-1.8-2.0/ Straight pull,Round	2.0/J-bent,Bladed	2.0/J-bent,Bladed	Butted (2.0-1.8-2.0)/Round
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Black	Black	Black	Black	Black
Nipple	Material	Aluminum	Aluminum	Brass	Brass	Aluminum
	Color	Silver	Silver	Silver	Silver	Red
Spoke Protector (Option)	-	CP-WH14/15	-	CP-WH12/13	-	
Reflector (Option)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)		CATEYE: RR-550-WUW (JIS/CPSC) RR-550-WUA (AS) RR-317-WUA (DIN)		CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	
Weight *	1796g/pair (Front:817g,Rear:979g)		1982g/pair (Front:895g,Rear:1087g)		1702g/pair (Front:780g,WH-M775 Rear:922g)	
Note	Recommended Tire width:1.50-2.25		Recommended Tire width:1.50-2.25		Recommended Tire width:1.50-2.25	
	* Weight does not include quick release or valve stem.		** Weight does not include quick release or rim tape		* Weight does not include valve stem.	

# Wheel Specifications (MTB)

Model No.		WH-M776 (front)	WH-M776 (rear)	WH-M775 (front)	WH-M775 (rear)	WH-M770 (front)	WH-M770 (rear)
Freehub Body	Speeds	-	8/9	-	8/9	-	8/9
	11T Compatible	-	X	-	X	-	X
	Quick Engagement	-	X	-	X	-	X
	Material	-	Steel	-	Steel	-	Steel
O.L.D.		110mm Thru Axle	135mm	100mm	135mm	100mm	135mm
Hub Axle	QR	N/A (20mm thru axle)	X	X	X	X	X
	Length	-	146mm	108mm	146mm	108mm	146mm
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized	Buffed / Shot / Anodized
	Seal	Contact	Contact	Contact	Contact	Contact	Contact
	Center Lock Rotor Mount	X	X	X	X	-	-
QR Lever	Material	-	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	-	Anodized	Anodized	Anodized	Anodized	Anodized
	QR Skewer Length	-	168mm	133mm	168mm	133mm	168mm
Rim	Type	UST	UST	UST	UST	UST	UST
	Size	559 X 21C (26")	559 X 21C (26")	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")
	Offset rim	-	-	-	-	-	X
	Welded joint	X	X	X	X	X	X
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
	Height/Width	22mm/26.4mm	22mm/26.4mm	21mm/23.3mm	21mm/23.3mm	21mm/23.1mm	21mm/23.1mm
	Brazed reinforcement	X	X	X	X	X	X
	Requires rim tape	-	-	-	-	-	-
Brake type	Disc	Disc	Disc	Disc	Rim	Rim	
Spokes	No. of Spokes	24	24	24	24	20	24
	Gauge/Shape	Straight(2.0)/Round	Straight(2.0)/Round	Butted (2.0-1.8-2.0)/Round	Butted (2.0-1.8-2.0)/Round	Butted (2.0-1.8-2.0)/Round	Butted (2.0-1.8-2.0)/Round
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Black	Black	Black	Black	Black	Black
Nipple	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Color	Red	Red	Red	Red	Red	Red
Spoke Protector (Option)		-	CP-WH14/15	-	CP-WH14/15	-	CP-WH14/15
Reflector (Option)		CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)		CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)		CAT EYE : RR-550-WUW/W SMN 03 (CPSC/JIS/BS), RR-550-WUA/A SMN03 (AS), RR-317-WUA/4K SMN03 (DIN)	
Weight *		2043g/pair (Front:959g,Rear:1084g)		1677g/pair (Front:755g,Rear:922g)		1670g/pair (Front:722g,Rear:948g)	
Note		Recommended Tire width:1.95-2.50		Recommended Tire width:1.50-2.25		Recommended Tire width:1.50-2.25	
		* Weight does not include quick release or valve stem.		* Weight does not include quick release or valve stem.		* Weight does not include quick release or valve stem.	

# Wheel Specifications (MTB)

Model No.	WH-M505 (front)	WH-M505 (rear)	WH-M505 (front) disc	WH-M505 (rear) disc	
Freehub Body	Speeds	-	8/9	-	8/9
	11T Compatible	-	X	-	X
	Quick Engagement	-	-	-	-
	Material	-	Steel	-	Steel
O.L.D.	100mm	135mm	100mm	135mm	
Hub Axle	QR	X	X	X	X
	Length	108mm	146mm	108mm	146mm
	Material	Steel	Steel	Steel	Steel
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Shot / Anodized	Shot / Anodized	Shot / Anodized	Shot / Anodized
	Seal	Contact	Contact	Contact	Contact
	Center Lock Rotor Mount	X	X	X	X
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized
	QR Skewer Length	133mm	168mm	133mm	168mm
Rim	Type	Clincher	Clincher	Clincher	Clincher
	Size	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")	559 X 19C (26")
	Offset rim	-	-	-	-
	Welded joint	-	-	-	-
	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized
	Height/Width	22mm/25.2mm	22mm/25.2mm	22mm/25.6mm	22mm/25.6mm
	Brazed reinforcement	-	-	-	-
	Requires rim tape	X	X	X	X
Brake type	Rim and Disc	Rim and Disc	Disc	Disc	
Spokes	No. of Spokes	28	28	28	28
	Gauge/Shape	Straight(2.0)/Bladed	Straight(2.0)/Bladed	Straight(2.0)/Bladed	Straight(2.0)/Bladed
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Black	Black	Black	Black
Nipple	Material	Brass	Brass	Brass	Brass
	Color	Silver	Silver	Silver	Silver
Spoke Protector (Option)	-	CP-WH12/13	-	CP-WH12/13	
Reflector (Option)	CATEYE: RR-550-WUW (JIS/CPSC) RR-550-WUA (AS) RR-317-WUA (DIN)		CATEYE: RR-550-WUW (JIS/CPSC) RR-550-WUA (AS) RR-317-WUA (DIN)		
Weight *	2088g/pair (Front:945g,Rear:1143g)		2104g/pair (Front:953g,Rear:1151g)		
Note	Recommended Tire width:1.50-2.25		Recommended Tire width:1.50-2.25		
	* Weight does not include quick release or valve stem.		* Weight does not include quick release or valve stem.		

# Wheel Specifications (Road)

Model No.		WH-7850-C50-TU (front)	WH-7850-C50-TU (rear)	WH-7850-C50-CL (front)	WH-7850-C50-CL (rear)	WH-7850-C24-TU (front)	WH-7850-C24-TU (rear)
Freehub Body (*note)	Speeds	-	8/9/10*	-	8/9/10*	-	8/9/10*
	11T Compatible	-	X	-	X	-	X
	Quick Engagement	-	X	-	X	-	X
	Material	-	Titanium	-	Titanium	-	Titanium
O.L.D.		100mm	130mm	100mm	130mm	100mm	130mm
Hub Axle	Length	108mm	141mm	108mm	141mm	108mm	141mm
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized
	Seal	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
	QR Skewer Length	133mm	163mm	133mm	163mm	133mm	163mm
Rim	Type	Tubular	Tubular	Clincher	Clincher	Tubular	Tubular
	Size	700C	700C	622 X 15C (700C)	622 X 15C (700C)	700C	700C
	Offset rim	-	-	-	-	-	X
	Welded joint	-	-	X	X	-	-
	Material	CFRP	CFRP	CFRP / Aluminum	CFRP / Aluminum	CFRP	CFRP
	Finish	-	-	-	-	-	-
	Height/Width	50mm/20.8mm	50mm/20.8mm	50mm/20.8mm	50mm/20.8mm	24mm/20.8mm	24mm/20.8mm
	Brazed reinforcement	-	-	-	-	-	-
Requires rim tape	-	-	X	X	-	-	
Spokes	Shape	Butted(2.0-1.8-2.0)/Bladed	Butted(2.0-1.8-2.0)/Bladed	Butted(2.0-1.8-2.0)/Bladed	Butted(2.0-1.8-2.0)/Bladed	Butted(2.0-1.5-2.0)/Bladed	RH:Butted(2.0-1.8-2.0)/Bladed LH:Butted(2.0-1.5-2.0)/Bladed
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Ion plating	Ion plating	Black	Black	Ion plating	Ion plating
Spoke Protector (Option)		-	CP-WH23	-	CP-WH23	-	CP-WH23
Reflector (Option)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)	
Weight **		1469g/pair (Front:642g,Rear:827g)		1695g/pair (Front:755g,Rear:940g)		1254g/pair (Front:527g,Rear:727g)	
Note		-	*Can be used for 10-speed with an additional spacer.	-	*Can be used for 10-speed with an additional spacer.	-	*Can be used for 10-speed with an additional spacer.
		** Weight does not include quick release		Recommended Tire width 19-25C ** Weight does not include quick release		** Weight does not include quick release	

# Wheel Specifications (Road)

Model No.		WH-7850-C24-TL (front)	WH-7850-C24-TL (rear)	WH-7850-C24-CL (front)	WH-7850-C24-CL (rear)	WH-7850-SL (front)	WH-7850-SL (rear)
Freehub Body (*note)	Speeds	-	8/9/10*	-	8/9/10*	-	8/9/10*
	11T Compatible	-	X	-	X	-	X
	Quick Engagement	-	X	-	X	-	X
	Material	-	Titanium	-	Titanium	-	Titanium
O.L.D.		100mm	130mm	100mm	130mm	100mm	130mm
Hub Axle	Length	108mm	141mm	108mm	141mm	108mm	141mm
	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized
	Seal	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
	QR Skewer Length	133mm	163mm	133mm	163mm	133mm	163mm
Rim	Type	Tubeless	Tubeless	Clincher	Clincher	Tubeless	Tubeless
	Size	622 X 15C (700C) Tubeless	622 X 15C (700C) Tubeless	622 X 15C (700C)	622 X 15C (700C)	622 X 15C (700C) Tubeless	622 X 15C (700C) Tubeless
	Offset rim	-	X	-	X	-	X
	Welded joint	X	X	X	X	X	X
	Material	CFRP / Aluminum	CFRP / Aluminum	CFRP / Aluminum	CFRP / Aluminum	Scandium alloy	Scandium alloy
	Finish	-	-	-	-	Anodized	Anodized
	Height/Width	24mm/20.8mm	23mm/20.8mm	24mm/20.8mm	23mm/20.8mm	24mm/20.8mm	23mm/20.8mm
	Brazed reinforcement	-	-	-	-	X	X
Requires rim tape	-	-	X	X	-	-	
Spokes	Shape	Butted(2.0-1.5-2.0)/Bladed	RH:Butted(2.0-1.8-2.0)/Bladed LH:Butted(2.0-1.5-2.0)/Bladed	Butted(2.0-1.5-2.0)/Bladed	RH:Butted(2.0-1.8-2.0)/Bladed LH:Butted(2.0-1.5-2.0)/Bladed	Butted(2.0-1.5-2.0)/Bladed	RH:Butted(2.0-1.8-2.0)/Bladed LH:Butted(2.0-1.5-2.0)/Bladed
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Black	Black	Black	Black	Black	Black
Spoke Protector (Option)		-	CP-WH23	-	CP-WH23	-	CP-WH23
Reflector (Option)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)	
Weight **		1420g/pair		1386g/pair (Front:592g,Rear:794g)		1514g/pair (Front:649g,Rear:865g)	
Note			*Can be used for 10-speed with an additional spacer.		*Can be used for 10-speed with an additional spacer.		*Can be used for 10-speed with an additional spacer.
		Recommended Tire width 19-25C		Recommended Tire width 19-25C		Recommended Tire width 19-25C	
		** Weight does not include quick release or valve stem		** Weight does not include quick release or rim tape		** Weight does not include quick release or valve stem	



# Wheel Specifications (Road)

Model No.		WH-RS80 (front)	WH-RS80 (rear)	WH-6700 (front)	WH-6700 (rear)	WH-RS30 (front)	WH-RS30 (rear)
Freehub Body (*note)	Speeds	-	8/9/10*	-	8/9/10*	-	8/9/10*
	11T Compatible	-	X	-	X	-	X
	Quick Engagement	-	-	-	X	-	-
	Material	-	Steel	-	Steel	-	Steel
O.L.D.		100mm	130mm	100mm	130mm	100mm	130mm
Hub Axle	Length	108mm	141mm	108mm	141mm	108mm	141mm
	Material	Steel	Aluminum	Aluminum	Aluminum	Steel	Steel
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Polish / Anodized	Polish / Anodized
	Seal	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized	Anodized	Anodized
	QR Skewer Length	133mm	163mm	133mm	163mm	133mm	163mm
Rim	Type	Clincher	Clincher	Tubeless	Tubeless	Clincher	Clincher
	Size	622 X 15C (700C)	622 X 15C (700C)	622 X 15C (700C) Tubeless	622 X 15C (700C) Tubeless	622 X 15C (700C)	622 X 15C (700C)
	Offset rim	-	X	-	X	-	X
	Welded joint	X	X	X	X	-	-
	Material	CFRP / Aluminum	CFRP / Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	-	-	Anodized	Anodized	Anodized	Anodized
	Height/Width	24mm/20.8mm	23mm/20.8mm	24mm/20.8mm	23mm/20.8mm	30mm/20.8mm	30mm/20.8mm
	Brazed reinforcement	-	-	X	X	-	-
	Requires rim tape	X	X	-	-	X	X
Spokes	Shape	Butted(2.0-1.5-2.0)/Bladed	RH:Butted(2.0-1.8-2.0)/Bladed LH:Butted(2.0-1.5-2.0)/Bladed	2.0-1.5-2.0/ Straight pull,Bladed	RH:2.0-1.8-2.0/ Straight pull,Bladed LH:2.0-1.5-2.0/ Straight pull,Bladed	Butted(2.0-1.8-2.0)/Bladed	Butted(2.0-1.8-2.0)/Bladed
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Silver	Silver	Black	Black	Silver	Silver
Spoke Protector (Option)		-	CP-WH23	-	CP-WH23	-	CP-WH23
Reflector (Option)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)	
Weight **		1521g		1652g/pair (Front:695g,Rear:957g)		1885g/pair (Front:816g,Rear:1069g)	
Note		-	*Can be used for 10-speed with an additional spacer.	-	*Can be used for 10- speed with an additional spacer.	-	*Can be used for 10- speed with an additional spacer.
		Recommended Tire width 19-25C		Recommended Tire width 19-25C		Recommended Tire width 19-28C	
		** Weight does not include quick release or rim tape		** Weight does not include quick release or valve stem		** Weight does not include quick release or rim tape	

# Wheel Specifications (Road)

Model No.		WH-RS20 (front)	WH-RS20 (rear)	WH-RS10 (front)	WH-RS10 (rear)
Freehub Body (*note)	Speeds	-	8/9/10*	-	8/9/10*
	11T Compatible	-	X	-	X
	Quick Engagement	-	-	-	-
	Material	-	Steel	-	Steel
O.L.D.		100mm	130mm	100mm	130mm
Hub Axle	Length	108mm	141mm	108mm	141mm
	Material	Steel	Steel	Steel	Steel
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Polish / Anodized	Polish / Anodized	Shot / Anodized	Shot / Anodized
	Seal	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized
	QR Skewer Length	133mm	163mm	133mm	163mm
Rim	Type	Clincher	Clincher	Clincher	Clincher
	Size	622 X 15C (700C)	622 X 15C (700C)	622 X 15C (700C)	622 X 15C (700C)
	Offset rim	-	X	-	X
	Welded joint	-	-	-	-
	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Anodized	Anodized
	Height/Width	24mm/20.8mm	24mm/20.8mm	24mm/20.8mm	24mm/20.8mm
	Brazed reinforcement	-	-	-	-
	Requires rim tape	X	X	X	X
Spokes	Shape	Butted(2.0-1.8-2.0)/Bladed	Butted(2.0-1.8-2.0)/Bladed	Straight(2.0)/Bladed	Straight(2.0)/Bladed
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Silver	Silver	Black/Silver	Black/Silver
Spoke Protector (Option)		-	CP-WH23	-	CP-WH23
Reflector (Option)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)		CAT EYE : RR-550-WUW SW (CPSC/JIS/BS), RR-550-WUA SW (AS), RR-317-WUA SW (DIN)	
Weight **		1825g/pair (Front:769g,Rear:1056g)		1859g/pair (Front:783g,Rear:1076g)	
Note		-	*Can be used for 10-speed with an additional spacer.	-	*Can be used for 10-speed with an additional spacer.
		Recommended Tire width 19-28C		Recommended Tire width 19-28C	
		** Weight does not include quick release or rim tape		** Weight does not include quick release or rim tape	

# Wheel Specifications (Road)

Model No.		WH-R500-A (front)	WH-R500-A (rear)	WH-R500 (front)	WH-R500 (rear)	
Freehub Body (*note)	Speeds	-	8/9/10*	-	8/9/10*	
	11T Compatible	-	X	-	X	
	Quick Engagement	-	-	-	-	
	Material	-	Steel	-	Steel	
O.L.D.		100mm	130mm	100mm	130mm	
Hub Axle	Length	108mm	141mm	108mm	141mm	
	Material	Steel	Steel	Steel	Steel	
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	
	Seal	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	Labyrinth and Contact	
QR Lever	Material	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Barrel	Barrel	Barrel	Barrel	
	QR Skewer Length	133mm	163mm	133mm	163mm	
Rim	Type	Clincher	Clincher	Clincher	Clincher	
	Size	622 X 15C (700C)	622 X 15C (700C)	622 X 15C (700C)	622 X 15C (700C)	
	Offset rim	-	-	-	-	
	Welded joint	-	-	-	-	
	Material	Aluminum	Aluminum	Aluminum	Aluminum	
	Finish	Anodized	Anodized	Anodized	Anodized	
	Height/Width	24mm/20.8mm	24mm/20.8mm	24mm/20.8mm	24mm/20.8mm	
	Brazed reinforcement	-	-	-	-	
	Requires rim tape	X	X	X	X	
Spokes	Shape	Straight(2.0)/Bladed	Straight(2.0)/Bladed	Straight(2.0)/Round	Straight(2.0)/Round	
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	
	Color	Black	Black	Black	Black	
Spoke Protector (Option)		-	CP-FH02 (21-25T) CP-FH35 (27T)	-	CP-FH02 (21-25T) CP-FH35 (27T)	
Reflector (Option)		CATEYE: RR-550-WUW/W SMN03 (JIS/CPSC) RR-550-WUA/A SMN03 (AS) RR-317-WUA/4K SMN03 (DIN)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	CATEYE: RR-550-WUW/W SMN03 (JIS/CPSC) RR-550-WUA/A SMN03 (AS) RR-317-WUA/4K SMN03 (DIN)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	
Weight **		1900g/pair (Front:822g,Rear:1078g)		1900g/pair (Front:822g,Rear:1078g)		
Note	-		*Can be used for 10-speed with an additional spacer.	-		
	Recommended Tire width 19-28C			Recommended Tire width 19-28C		
	** Weight does not include quick release or rim tape			** Weight does not include quick release or rim tape		

## Wheel Specifications (Trekking)

Model No.		WH-S501-3D (front)	WH-S501-8D (rear)	WH-S501-V-3D (front)	WH-S500-V (no dynamo front)
Freehub Body	Speeds	-	8 internal	-	-
	11T Compatible	-	-	-	-
	Material	-	-	-	-
O.L.D.		100mm	135mm	100mm	100mm
Hub Axle	QR	X	-	X	X
	Length	108mm	185mm	108mm	108mm
	Material	Steel	Steel	Steel	Steel
Hub Shell	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized	Buffed / Anodized
	Seal	Contact	Labyrinth and Contact	Contact	Contact
	Center Lock Rotor Mount	X	X	X	X
QR Lever	Material	Aluminum	-	Aluminum	Aluminum
	Finish	Anodized	-	Anodized	Anodized
	QR Skewer Length	133mm	-	133mm	133mm
Rim	Type	Clincher	Clincher	Clincher	Clincher
	Size	622 X 17C (700C-28")	622 X 17C (700C-28")	622 X 19C (700C-28")	622 X 19C (700C-28")
	Material	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Anodized	Anodized	Barrel / Anodized	Barrel / Anodized
	Height/Width	22mm/23.2mm	22mm/23.2mm	20.0mm/23.5mm	20.0mm/23.5mm
	Requires rim tape	X	X	X	X
Spokes	Brake type	Disc	Disc	Rim and Disc	Rim and Disc
	No. of Spokes	24	24	24	24
	Gauge/Shape	Butted(2.3-1.8-2.3)/Round	Butted(2.3-1.8-2.3)/Round	Butted(2.3-1.8-2.3)/Round	Butted(2.3-1.8-2.3)/Round
Nipple	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Color	Black	Black	Black	Black
	Material	Brass	Brass	Brass	Brass
Spoke Protector (Option)		-	-	-	-
Reflector (Option)		CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)
Weight *		3733g/pair (Front:1351g,Rear:2388g)		1308g	895g
Note		Recommended Tire width:25-37C		Recommended Tire width:28-47C	Recommended Tire width:28-47C
		6V 3.0W Sports Dynamo		6V 3.0W Sports Dynamo	No dynamo for front
		Black and Silver Version Available		Black and Silver Version Available	Black and Silver Version Available
		* Weight does not include quick release or rim tape		* Weight does not include quick release or rim tape ** Accessories are sold separately	* Weight does not include quick release or rim tape

## Wheel Specifications (Trekking)

Model No.		WH-S501-V-8D (rear)	WH-T565 (front)	WH-T565 (rear)
Freehub Body	Speeds	8 internal	-	8/9
	11T Compatible	-	-	X
	Material	-	-	Steel
O.L.D.		135mm	100mm	135mm
Hub Axle	QR	-	X	X
	Length	185mm	133mm	168mm
	Material	Steel	108mm	146mm
Hub Shell	Material	Aluminum	Steel	Steel
	Finish	Buffed / Anodized	Contact	Contact
	Seal	Labyrinth and Contact	Aluminum	Aluminum
	Center Lock Rotor Mount	X	Shot/Anodized	Shot/Anodized
QR Lever	Material	-	Aluminum	Aluminum
	Finish	-	Barrel	Barrel
	QR Skewer Length	-	X	X
Rim	Type	Clincher	Clincher	Clincher
	Size	622 X 19C (700C-28")	622 X 19C (28")	622 X 19C (28")
	Material	Aluminum	Aluminum	Aluminum
	Finish	Barrel / Anodized	Anodized	Anodized
	Height/Width	20.0mm/23.5mm	22mm/25.2mm	22mm/25.2mm
	Requires rim tape	X	X	X
Spokes	Brake type	Rim and Disc	Rim and Disc	Rim and Disc
	No. of Spokes	24	24	24
	Gauge/Shape	Butted(2.3-1.8-2.3)/Round	Straight(2.3)/Bladed	RH:Straight (2.0)/Bladed LH:Straight (2.3)/Bladed
	Material	Stainless Steel	Stainless Steel	Stainless Steel
Nipple	Color	Black	Black	Stainless Steel
	Material	Brass	Aluminum	Aluminum
	Color	Black coated	Silver	Silver
Spoke Protector (Option)		-	-	CP-WH10/WH11
Reflector (Option)		CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	CATEYE: RR-550-WUW SW W/O BRACKET (JIS/CPSC) RR-550-WUA SW W/O BRACKET (AS) RR-317-WUA SW W/O BRACKET (DIN)	
Weight *		2345g	1113g	1260g
Note	Recommended Tire width:28-47C		Recommended Tire width:28-47C	
	Black and Silver Version Available			
	* Weight does not include quick release or rim tape ** Accessories are sold separately		* Weight does not include quick release or rim tape	

# Pedal Specifications

Model No.	PD-7810	PD-6700	PD-5610	PD-R540
Type	Road	Road	Road	Road
SPD-SL	Single Sided	Single Sided	Single Sided	Single Sided
Pedal Axle Material	Nickel Chromoly Steel	Chromoly Steel	Chromoly Steel	Chromoly Steel
Cartridge Axle	-	X	X	X
Sealed Mechanism	X	X	X	X
Cleat Retention Adjuster	X	X	X	X
Cleat Included	SM-SH11	SM-SH11	SM-SH11	SM-SH11
Optional Cleat	SM-SH10	SM-SH10	SM-SH10	SM-SH10
Reflector	SM-PD58	SM-PD58	SM-PD58	SM-PD58
Pedal Body	Material	Aluminum	Aluminum	Aluminum
	Finish	Polished / Clear coated	Painted	Painted
Body Cover Material	Special Stainless	Polished Special Stainless	Stainless	Resin
Wide Platform	x	X	X	-
Road Clearance	35°	34°	34°	34°
Weight(pair)	278g	317g	322g	330g
Note			Silver and Black Version Available	Silver and Black Version Available

# Pedal Specifications

Model No.	PD-M970	PD-M770	PD-M647	PD-MX30	PD-M545	PD-M540	PD-M424
Type	Off-Road	Off-Road	Off-Road/BMX	Off-Road/BMX Flat Pedal	Off-Road/BMX	Off-Road	Off-Road/BMX
SPD	Dual Sided	Dual Sided	Dual Sided	Non-SPD	Dual Sided	Dual Sided	Dual Sided
Pedal Axle Material	Chromoly Steel	Chromoly Steel	Chromoly Steel	Chromoly Steel	Chromoly Steel	Chromoly Steel	Chromoly Steel
Cartridge Axle	X	X	X	X	X	X	X
Sealed Mechanism	X	X	X	X	X	X	X
Cleat Retention Adjuster	X	X	X	-	X	X	X
Pop-up Cage	-	-	X	-	X	-	X
Cleat Included	SM-SH51	SM-SH51	SM-SH51	-	SM-SH51	SM-SH51	SM-SH51
Optional Cleat	SM-SH56	SM-SH56	SM-SH56	-	SM-SH56	SM-SH56	SM-SH56
Reflector	SM-PD22	SM-PD22	SM-PD60	Y41B98010	SM-PD40	SM-PD22	SM-PD40
Pedal Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Painted	Anodized	Painted	Painted	Anodized	Centrifugal Barrel
Cage	Material	-	-	Resin	-	Aluminum	-
Weight(pair)	325g	350g	568g	492g	567g	352g	472g
Note							

# Pedal Specifications

Model No.		PD-M520	PD-M505	PD-M324	PD-A530	PD-A520
Type		Off-Road	Off-Road	Multi-purpose	Sport / Multi-purpose	Sport
SPD		Dual Sided	Dual Sided	Single Sided	Single Sided	Single Sided
Pedal Axle Material		Chromoly Steel	Chromoly Steel	Chromoly Steel	Chromoly Steel	Chromoly Steel
Cartridge Axle		X	-	-	X	X
Sealed Mechanism		X	X	X	X	X
Cleat Retention Adjuster		X	X	X	X	X
Pop-up Cage		-	-	-	-	-
Cleat Included		SM-SH51	SM-SH51	SM-SH56	SM-SH51	SM-SH51
Optional Cleat		SM-SH56	SM-SH56	SM-SH51	SM-SH56	SM-SH56
Reflector		SM-PD22	SM-PD22	Y41B98010	SM-PD61	SM-PD59
Pedal Body	Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
	Finish	Barrel (silver) /Painted (black)	Barrel/Painted	Painted	Painted	High Finishing
Cage	Material	-	-	Steel	-	-
Weight(pair)		380g	443g	533g	383g	315g
Note		Silver and Black Version Available	Silver and Black Version Available			



# Cycle Computer (Head Display unit) Specifications

Head Display unit Model No.	SC-7900	SC-6502
Rear Speeds	10	7-10
Front Speeds	Single/Double/Triple	Single/Double/Triple
4 different wheel size programs	X	X
Wheel size range	1300mm-2400mm	X
Wireless Speed Sensor	X	X
Wireless Heart rate chest belt	X	-
Mode & Start/Stop switch	Right & Left	Right & Left
ODO Meter Reset	X	X
Auto Start & Auto Stop	X	X
Current Speed	X	X
Clock	X	X
Trip Time	X	X
Trip Distance	X	X
ODO Meter	X	X
Stop Watch	X	X
Stop Watch-Trip Distance	-	X
Stop Watch-Average Speed	-	X
Stop Watch-Maximum Speed	-	X
Cadence available	X	X
Main Display Cadence	X	X
Maximum Speed	X	X
Average Speed	X	X
Lap Counter	-	X
Automatic Lapping	X	-
Files in memory	100	-
Laps with recall	99	-
Calorie consumption	X	-
Continuous accurate heart rate (% / bpm)	X	-
Maximum heart rate	X	-
Average heart rate	X	-
Target zones with visual & audible alarm	X	-
Altitude, ascent	X	-
Inclinometer	X	-
Gear Teeth Number (Digital) available	X	X
Gear Indicator (Bar) available	X	X
Pace Arrow	X	X
Low Battery Display	X	X
Download Exercise data to PC	X	-
Wireless USB adaptor	X	-
Planning and Analysis software	X	-
For Dura Ace Di2	Battery Indicator	X
	Adjust indicator	X
Note	Compatible Shift lever with ST-7900,ST-7970,ST-7971	

# Cycle Computer (Head Display unit) Specifications

Head Display unit Model No.	SC-TX30	SC-TX31
7 different wheel size programs (20"-22"-24"-26"-27"-28"-700C)	X	-
ODO Meter Reset	-	-
Front single gear available	-	-
Auto Start & Auto Stop	X	X
Water Resistant (1bar)	X	X
Current Speed	X	-
Clock	X	-
Trip Time	-	-
Trip Distance	-	-
ODO Meter	X	-
Stop Watch	-	-
Back Light (EL)	-	-
Stop Watch-Trip Distance	-	-
Stop Watch-Average Speed	-	-
Stop Watch-Maximum Speed	-	-
Cadence Available	-	-
Main Display Cadence	-	X
Maximum Speed	-	-
Average Speed	-	-
Lap Counter	-	-
Gear Number (Digital) Available	-	-
Gear Teeth Number (Digital) Available	-	-
Gear Ratio Available	-	-
Gear Indicator (Bar) Available	-	-
Pace Arrow	-	-
Low Battery Display	-	-
<b>Note</b>	Use with SM-TX30	Use with SC-TX50/SM-TX50/SM-TX30

Head Display unit Model No.	SC-FT50
Summary Wheel Size Setting (20"-22"-24"-26"-27"-28"-700-23C,25C,28C)	X
Current Time	X
Current Heart Rate	X
Maximum Heart Rate	X
Average Heart Rate	-
Exercise Intensity (Only graphic)	X
Calorie consumption	X
Current Speed	X
Maximum Speed	-
Lap Counter	-
Cyclink Time(Effective Exercise Time)	X
Traveling Time	X
Stop Watch	-
Current Time	X
Trip Distance	X
Stop Watch-Trip Distance	-
Exercise recording	X
Back Light	-
Auto Start & Auto Stop	X
Low Battery Display	X
Cadence Available	-
Gear Number (Digital) Available	-
PC Link (application software)	X
Heart rate curve diagram	X
Speed curve diagram	X
Exercise time diagram	X
Trip Distance diagram	X
Calorie consumption diagram	X
Custom diagram *	X
Goal Attainment Rate	X
Exercise Adviser	X
Calender	X
ODO Meter	X
ODO Meter Reset	X
Average Speed	X
Setting Function on PC	X
<b>Note</b>	For Japanese market only *User can make diagram to taste up to 20

## Cycle Computer (Head Display unit) Specifications

Series		Nexus
Model No.		SC-8S40
Wheel Size Range	24"-26"-700C	X
Front Single Gear Available		X
Current Speed		X
Clock		X
Trip Time		-
Trip Distance		X
Trip Meter Reset		X
ODO Meter		X
ODO Meter Reset		X
Maximum Speed		-
Average Speed		-
Gear Position Display		X
Gear Shifting Mode Select Switch		by SW-8S40 SW-8S40C
RD(SG) - Auto and Manual Display		X
Low Battery Display		X
Suspension Mode Select Switch		by SW-8S40
Suspension Mode Display		X
Suspension Hard and Soft Display		X
Display Panel Detachable		X
Back Light		X
Beep (on and off switch)		by SW-8S40 SW-8S40C
Note		

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# Cycle Computer (Harness kit) Specifications

Harness Kit Model No.	SM-SC70	SM-6502	SM-6501-A	SM-6500-RS
Compatible Head Display Unit	SC-6502	SC-6502	SC-6502/6501	SC-6502/6501
Compatible Shift Lever	ST-7801 ST-7803 ST-6600-S ST-6600-G ST-6603-S ST-6603-G ST-5600 ST-R700	ST-7801 ST-7803 ST-6600-S ST-6600-G ST-6603-S ST-6603-G ST-5600 ST-R700	ST-7703 ST-7700-C ST-6510 ST-5510 ST-4400 ST-3300 ST-3304 ST-R600 ST-R500	ST-7703 ST-7700-C ST-6510 ST-5510 ST-4400 ST-3300 ST-3304 ST-R600 ST-R500
Wireless Speed Sensor	X	-*	X	-
Connector Joint	-	-	-	-
Mode & Start/Stop switch	Right & Left	Right & Left	Right & Left	Right & Left
Hands-on-levers Control Capability	X	X	X	X
Cadence	X	X	X	X
Main Display Cadence	X	X	X	X
Gear Teeth Number (Digital)	SC-6502	SC-6502	SC-6501/6502	SC-6501/6502
Gear Indicator (Bar)	X	X	X	X
Note		*1350mm cable length for rear wheel		

Adapter Model No.		SM-C050WCA1	SM-C050WCA2
Clamp band for switch of SC-C052	Clamp band diameter	-	-
Sensor code adapter for front fork	Front fork diameter	18.0-44.0mm	-
	Number of installation cords	2	-
Sensor code adapter for brake cable	Number of installation cords	-	2

## CI-Deck Specifications

Series	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	Tourney	
Model No.	ID-TX55-6R	ID-TX55-7R	ID-TX55-LC	ID-TX55-LN	ID-TX50-6R	ID-TX50-7R	ID-TX50-LN	ID-TX50-L	ID-TX50-LC	SM-TX50	SM-TX30	SM-TX31	SM-TX32	
<b>Compatible Shift Lever</b>	SL-RS35/41 /41A/43/44	SL-RS35/41 /41A/43/44	-	-	SL-RS31/41/43	SB-C055A SL-RS31/41 /41A/43	SB-C055A SL-RS31/41 /41A/43	SB-C055A SL-RS31/41 /41A/43	SL-RS31	-	-	-	-	
<b>Front</b>	-	-	-	Friction	-	-	Friction	3-speed	-	-	-	-	-	
<b>Rear</b>	6-speed SIS	7-speed SIS	-	-	6-speed SIS	7-speed SIS	-	-	-	-	-	-	-	
<b>SL Compatible RD Type</b>	Top normal	Top normal	-	-	Top normal	Top normal	-	-	-	-	-	-	-	
<b>CID Cable</b>	Stainless Steel	Stainless Steel	-	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	-	-	-	-	-	
<b>CID Cable Type</b>	TX50	TX50	-	TX50	TX50	TX50	TX50	TX50	-	-	-	-	-	
<b>CID Cable Adjust</b>	X	X	-	X	X	X	X	X	-	-	-	-	-	
<b>Optical Gear Display</b>	<b>Front</b>	-	-	Friction	-	-	Friction	3-speed	-	-	-	-	-	
	<b>Rear</b>	6-speed	7-speed	-	-	6-speed	7-speed	-	-	-	-	-	-	
<b>Stainless CID Cable</b>	X	X	-	X	X	X	X	X	-	-	-	-	-	
<b>Clamp Band Diameter</b>	<b>22.2mm</b>	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>25.0mm</b>	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>22.2/25.0mm</b>	-	-	-	-	-	-	-	-	X	X	-	-	
<b>C.I.D Upper Cover</b>	<b>Material</b>	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	-	-	-	
	<b>Color</b>	Silver	Silver	Silver	Silver	Silver	Silver	Silver	Silver	Silver	-	-	-	
<b>C.I.D Body</b>	<b>Material</b>	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	-	-	-	
	<b>Color</b>	Black	Black	Black	Black	Black	Black	Black	Black	Black	-	-	-	
<b>Clamp Band</b>	<b>Material</b>	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	Resin	-	
	<b>Color</b>	Black	Black	Black	Black	Black	Black	Black	Black	Black	-	-	-	
<b>Note</b>	It uses together with SM-TX30/55.	It uses together with SM-TX30/55.	It uses together with SM-TX30/55.	It uses together with SM-TX30/55.	Use with SM-TX50/30,SC-TX50	Use with SM-TX50/30,SC-TX50	Use with SM-TX50/30,SC-TX50	Use with SM-TX50/30,SC-TX50	Use with SM-TX50/30,SC-TX50	Use with SM-TX50/30,SC-TX50 No gear position & display for front single crankset bicycle.	Bracket for ID-TX50/SC-TX31/SM-TX32	Bracket for ID-TX50/SC-TX30/SC-TX31/SM-TX31/SM-TX32	Cowling Use with SM-TX30.	Analog compass Use with SM-TX50/30,SC-TX50

## Lamp-Battery case Specifications

Lamp		LP-R600	LP-NX60	LP-NX55	LP-NX50	LP-NX35
Auto Light		-	X	X	X	X
Type		9.6V-5.0W	6V-2.4W	6V-2.4W	6V-2.4W	6V-2.4W
Main lamp		Flange type(Halogen)	1W Super Bright White LED	1W Super Bright White LED	Screw type (Xenon)	1W Super Bright White LED
Sub lamp		Super Bright White LED	Super Bright White LED	Super Bright White LED	Super Bright White LED	-
LED flashing function		-	× (by Main LED : 1W Super Bright White LED)	X (by sub LED : ring shape)	X (by sub LED : ring shape)	-
Electric Power Input		+ and -	+ and - ( Tab-on type / Connector type )	+ (frame earth)	+ (frame earth)	+ (frame earth)
Lamp body	Material	Resin	Resin	Resin	Resin	Resin
	Finish	Painted	Painted	Painted	Painted	Painted
Attachment Position		Above handlebar	Front fork Light stay	Front fork Light stay	Front fork Light stay	Front fork Light stay
Clamp Band Diameter		31.8/25.8/22.2mm	-	-	-	-
Switch	Auto	-	X	X	X	X
	Manual	X	-	-	-	-
Note		Only for Japanese market For 3.0W Dynamo	Only for Japanese market /With connection wire cable	Only for Japanese market /With connection wire cable	Only for Japanese market /With connection wire cable	Only for Japanese market /With connection wire cable

## Lamp-Battery case Specifications

Lamp		LP-NX30	LP-FTX3	LP-C050A-ATJ
Auto Light		X	X	X
Type		6V-2.4W	6V-2.4W	6V-2.4W
Main lamp		Screw type (Xenon)	1W Super Bright White LED	Screw type (Xenon)
Sub lamp		-	-	-
LED flashing function		-	-	-
Electric Power Input		+ (frame earth)	+ and -	+ and -
Lamp body	Material	Resin	Resin	Resin
	Finish	Painted	Painted	-
Attachment Position		Front fork Light stay	Front fork Light stay / Front fork center	Front fork Light stay
Clamp Band Diameter		-	-	-
Switch	Auto	X	X	X
	Manual	-	-	-
Note		Only for Japanese market /With connection wire cable	Only for Japanese market /With connection wire cable	Only for Japanese market /With connection wire cable

# Hub-Dynamo Specifications

Series		Non-Series	Alfine	Deore LX	Non-Series	Non-Series	Non-Series	Non-Series
Model No.		DH-T708	DH-S501	DH-T665	DH-3D72	DH-3D30-QR	DH-3D30-NT	DH-2D30-QR
Type		For disc Brake	For disc brake	For disc brake	For disc brake	For disc brake	For disc brake	For disc brake
Center Lock Mount Type		X	X	X	X	-	-	-
Voltage		6V	6V	6V	6V	6V	6V	6V
Output		3.0W	3.0W	3.0W	3.0W	3.0W	3.0W	2.4W
QR type		-	X	X	X	X	-	-
Nut type		X (SM-AX60)	-	-	-	-	X	X
Over Locknut Dim.		100mm	100mm	100mm	100mm	100mm	100mm	100mm
Flange Distance		79.6mm	52.1	52.1	52.1	51mm	51mm	51mm
Offset		3.9	3.8	3.8	3.8	4mm	4mm	4mm
Hole Reference (PCD)		70mm	70mm	70mm	70mm	74mm	74mm	74mm
Axle Length		135.2 (SM-AX60)	108mm	108mm	108mm	108mm	140mm	108mm
Spoke Size		#14	#14	#14	#14	#14	#14	#14
Seal		Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact
Spoke Hole	24H	-	-	-	-	-	-	-
	28H	-	-	-	-	-	-	-
	32H	X	X	X	X	X	-	-
	36H	X	X	X	X	X	X	X
Wheel Size	26-28inch	X	X	X	X	-	-	-
	16-28inch	-	-	-	-	X	X	X
	20-24inch	-	-	-	-	-	-	-
	24-28inch	-	-	-	-	-	-	-
	16-20inch	-	-	-	-	-	-	-
	Compatible wheel size (mm)	646-716mm	646-716mm	646-716mm	646-716mm	400-716mm	400-716mm	400-716mm
Roller Brake Modulator Grade	More than 26inch							
	High	-	-	-	-	-	-	-
	Standard	-	-	-	-	-	-	-
	20-24inch	-	-	-	-	-	-	-
Electric power output connector	J1 TYPE	-	-	-	-	-	-	-
	J2 TYPE	-	-	-	-	-	-	-
	E2 TYPE	X	X	X	X	X	X	X
	For ECOVISION type( 2 terminal )	-	-	-	-	-	-	-
Finish		Anodized	Anodized	Anodized	Anodized	Painted	Painted	Painted
Color		Anodized	Anodized ( Silver/Black )	Anodized	Anodized	Clear	Clear	Clear
Cooling fin on roller brake		-	-	-	-	-	-	-
Note		8mm E-thru, Shimano logo	Alfine color and logo					



# Hub-Dynamo Specifications

Series		Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	Deore LX	Deore LX
Model No.		DH-2D30-NT	DH-3N80	DH-2N80E	DH-3N72	DH-2N72	DH-T660-3N	DH-T660-2N
Type		For disc brake	Regular	Regular	Regular	Regular	Regular	Regular
Center Lock Mount Type		-	-	-	-	-	-	-
Voltage		6V	6V	6V	6V	6V	6V	6V
Output		2.4W	3.0W	2.4W	3.0W	2.4W	3.0W	2.4W
QR type		-	X	X	X	X	X	X
Nut type		X	-	-	-	-	-	-
Over Locknut Dim.		100mm	100mm	100mm	100mm	100mm	100mm	100mm
Flange Distance		51mm	60.0	60.0	60.0	60.0	60.0	60.0
Offset		4mm	0	0	0	0	0	0
Hole Reference (PCD)		74mm	70mm	70mm	70mm	70mm	70mm	70mm
Axle Length		140mm	108mm	108mm	108mm	108mm	108mm	108mm
Spoke Size		#14	#14	#14	#14	#14	#14	#14
Seal		Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact
Spoke Hole	24H	-	-	-	-	-	-	-
	28H	-	-	-	-	-	-	-
	32H	-	X	X	X	X	X	X
	36H	X	X	X	X	X	X	X
Wheel Size	26-28inch	-	X	X	X	X	X	X
	16-28inch	X	-	-	-	-	-	-
	20-24inch	-	-	-	-	-	-	-
	24-28inch	-	-	-	-	-	-	-
	16-20inch	-	-	-	-	-	-	-
	Compatible wheel size (mm)	400-716mm	646-716mm	646-716mm	646-716mm	646-716mm	646-716mm	646-716mm
Roller Brake Modulator Grade	More than 26inch							
	High	-	-	-	-	-	-	-
	Standard	-	-	-	-	-	-	-
	20-24inch	-	-	-	-	-	-	-
Electric power output connector	J1 TYPE	-	-	-	-	-	-	-
	J2 TYPE	-	-	-	-	-	-	-
	E2 TYPE	X	X	X	X	X	X	X
	For ECOVISION type( 2 terminal )	-	-	-	-	-	-	-
Finish		Painted	Anodized	Anodized	Anodized/Painted	Anodized	Anodized	Anodized
Color		Clear	Anodized	Anodized	Anodized/Black	Anodized	Anodized	Anodized
Cooling fin on roller brake		-	-	-	-	-	-	-
Note			Weight : 490g	Weight : 490g			w/ LX logo	w/ LX logo

# Hub-Dynamo Specifications

Series		Non-Series	Non-Series	Non-Series	Non-Series	CAPREO		Non-Series
Model No.		DH-3N30-QR	DH-3N20 (NT)	DH-2N35-QR	DH-2N35-NT	DH-F703	DH-F702	DH-F703-S
Type		Regular	Regular	Regular	Regular	Regular	Regular	Regular
Center Lock Mount Type		-	-	-	-	-	-	-
Voltage		6V	6V	6V	6V	6V	6V	6V
Output		3.0W	3.0W	2.4W	2.4W	3.0W	2.4W	3.0W
QR type		X	-	X	-	X	X	X
Nut type		-	X	-	X	-	-	-
Over Locknut Dim.		100mm	100mm	100mm	100mm	74mm	74mm	74mm
Flange Distance		60mm	60mm	60mm	60mm	44.6	44.6	44.6
Offset		0	0	0	0	0	0	0
Hole Reference (PCD)		74mm	74mm	74mm	74mm	74mm	74mm	74mm
Axle Length		108mm	140mm	108mm	140mm	82mm	82mm	82mm
Spoke Size		#14	#14	#14	#14	#14	#14	#14
Seal		Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact
Spoke Hole	24H	-	-	-	-	X	X	X
	28H	X	X	X	-	-	-	-
	32H	X	X	X	-	-	-	-
	36H	X	X	X	X	-	-	-
Wheel Size	26-28inch	-	-	-	-	-	-	-
	16-28inch	X	X	X	X	-	-	-
	20-24inch	-	-	-	-	-	-	-
	24-28inch	-	-	-	-	-	-	-
	16-20inch	-	-	-	-	X	X	X
	Compatible wheel size (mm)	400-716mm	400-716mm	400-716mm	400-716mm	400-536mm	400-536mm	400-536mm
Roller Brake Modulator Grade	More than 26inch							
	High	-	-	-	-	-	-	-
	Standard	-	-	-	-	-	-	-
	20-24inch	-	-	-	-	-	-	-
Electric power output connector	J1 TYPE	-	-	-	-	-	-	-
	J2 TYPE	-	-	-	-	-	-	-
	E2 TYPE	X	X	X	X	X	X	X
	For ECOVISION type( 2 terminal )	-	-	-	-	-	-	-
Finish		Painted	Painted	Painted	Painted	Anodized	Anodized	Painted
Color		Silver/Black	Silver/Black	Silver/Black	Silver/Black	Silver	Silver	Silver
Cooling fin on roller brake		-	-	X	X	X	X	X
Note								

## Hub-Dynamo Specifications

Series		Non-Series	Non-Series	Non-Series	Non-Series	Non-Series	NEXUS	NEXUS
Model No.		DH-F702-S	DH-3R30(QR)	DH-3R30(NT)	DH-2R30-E	DH-2R30-ES	DH-3NA1	DH-3NB1
Type		Regular	For hub roller brake	For hub roller brake	For hub roller brake	For hub roller brake	Regular	Regular
Center Lock Mount Type		-	-	-	-	-	-	-
Voltage		6V	6V	6V	6V	6V	6V	6V
Output		2.4W	3.0W	3.0W	2.4W	2.4W	3.0W	3.0W
QR type		X	X	-	-	-	-	X
Nut type		-	-	X	X	X	X	-
Over Locknut Dim.		74mm	100mm	100mm	100mm	100mm	100mm	100mm
Flange Distance		44.6	58.1	58.1	58.1mm	58.1mm	60.0	60
Offset		0	4.7	4.7	4.7	4.7	0	0
Hole Reference (PCD)		74mm	74mm	74mm	74mm	74mm	80mm	80mm
Axle Length		82mm	108mm	140mm	140mm	140mm	140mm	108mm
Spoke Size		#14	#14	#14	#14	#14	#14	#14
Seal		Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact
Spoke Hole	24H	X	-	-	-	-	-	-
	28H	-	-	-	-	X	-	-
	32H	-	-	-	X	-	-	X
	36H	-	X	X	X	X	X	X
Wheel Size	26-28inch	-	X	X	X	-	X	X
	16-28inch	-	-	-	-	-	-	-
	20-24inch	-	-	-	-	-	-	-
	24-28inch	-	-	-	-	-	-	-
	16-20inch	X	-	-	-	X	-	-
	Compatible wheel size (mm)	400-536mm	646-716mm	646-716mm	646-716mm	400-536mm	646-716mm	646-716mm
Roller Brake Modulator Grade	More than 26inch							
	High	-	X	X	X	-	-	-
	Standard	-	X	X	X	X	-	-
	20-24inch	-	-	-	-	-	-	-
Electric power output connector	J1 TYPE	-	-	-	-	-	-	-
	J2 TYPE	-	-	-	-	-	-	-
	E2 TYPE	X	X	X	X	X	-	-
	For ECOVISION type( 2 terminal )	-	-	-	-	-	X	X
Finish		Painted	Painted	Painted	Painted	Painted	Painted	Painted
Color		Silver	Silver/Black	Silver/Black	Silver/Black	Silver	Clear	Inter-8 Silver
Cooling fin on roller brake		X	-	-	-	-	-	-
Note							for only ECOVISION AI-3S30	for only ECOVISION AI-8S40

# Hub-Dynamo Specifications

Series		NEXUS	NEXUS	NEXUS	Non-Series	Non-Series	NEXUS	NEXUS
Model No.		DH-3RB1	DH-2N30-J	DH-2N30-JC	DH-2N30-JW	DH-2N30-JWC	DH-2N20-DT	DH-2N20C-DT
Type		For hub roller brake	Regular	Regular	Regular	Regular	Regular	Regular
Center Lock Mount Type		-	-	-	-	-	-	-
Voltage		6V	6V	6V	6V	6V	6V	6V
Output		3.0W	2.4W	2.4W	2.4W	2.4W	2.4W	2.4W
QR type		X	-	-	-	-	-	-
Nut type		-	X	X	X	X	X	X
Over Locknut Dim.		100mm	93mm	93mm	100mm	100mm	100mm	100mm
Flange Distance		53.3	60.0	60.0	60.0	60.0	60.0	60.0
Offset		2.35	0	0	2.7	2.7	0.8	0.8
Hole Reference (PCD)		80mm	74mm	74mm	74mm	74mm	74mm	74mm
Axle Length		108mm	150mm	150mm	140mm	140mm	140mm	140mm
Spoke Size		#14	#14	#14	#14	#14	#14	#14
Seal		Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact	Single Contact
Spoke Hole	24H	-	-	-	-	-	-	-
	28H	-	-	X	-	-	-	-
	32H	X	-	-	-	-	-	-
	36H	X	X	-	X	X	X	X
Wheel Size	26-28inch	X	-	-	-	-	-	-
	16-28inch	-	-	-	-	-	-	-
	20-24inch	-	-	X	-	X	-	X
	24-28inch	-	X	-	X	-	X	-
	16-20inch	-	-	-	-	-	-	-
	Compatible wheel size (mm)	646-716mm	24"-28"	20"-24"	24"-28"	20"-24"	24"-28"	20"-24"
Roller Brake Modulator Grade	More than 26inch	High	X	-	-	-	-	-
	20-24inch	Standard	-	-	-	-	-	-
		-	-	-	-	-	-	-
Electric power output connector	J1 TYPE	-	-	-	-	-	-	-
	J2 TYPE	-	X	X	X	X	-	-
	E2 TYPE	-	-	-	-	-	X	X
	For ECOVISION type( 2 terminal )	X	-	-	-	-	-	-
Finish		Painted	Painted	Painted	Painted	Painted	Painted	Painted
Color		Inter-8 Silver	Clear	Clear	Black	Black	Black	Black
Cooling fin on roller brake		-	-	-	-	-	-	-
Note		for only ECOVISION AI-8S40	* Japanese market only	* Japanese market only	* Japanese market only	* Japanese market only	* Japanese market only	* Japanese market only

## Hub-Dynamo Specifications

Series		NEXUS	NEXUS
Model No.		DH-2R30-J	DH-2R30-JC
Type		For hub roller brake	For hub roller brake
Center Lock Mount Type		-	-
Voltage		6V	6V
Output		2.4W	2.4W
QR type		-	-
Nut type		X	X
Over Locknut Dim.		100mm	100mm
Flange Distance		58.1	58.1
Offset		4.8	4.8
Hole Reference (PCD)		74mm	74mm
Axle Length		140mm	140mm
Spoke Size		#14	#14
Seal		Single Contact	Single Contact
Spoke Hole	24H		
	28H	-	-
	32H	-	-
	36H	X	X
Wheel Size	26-28inch	-	-
	16-28inch	-	-
	20-24inch	-	X
	24-28inch	X	-
	16-20inch		
	Compatible wheel size (mm)	24"-28"	20"-24"
Roller Brake Modulator Grade	More than 26inch		
	High	-	-
	Standard	X	X
	20-24inch	-	-
Electric power output connector	J1 TYPE	-	-
	J2 TYPE	X	X
	E2 TYPE	-	-
	For ECOVISION type( 2 terminal )	-	-
Finish		Painted	Painted
Color		Clear	Clear
Cooling fin on roller brake		-	-
Note		* Japanese market only	* Japanese market only

# Capreo Specifications

## RD

<b>Model No.</b>		<b>RD-F700</b>
<b>Pulley Cage</b>		SS/SGS
<b>Speeds</b>		9
<b>Rapid-Rise Rear Derailleur</b>		-
<b>Total Capacity</b>		17T
<b>Max. Rear Sprocket</b>		26T
<b>Min. Rear Sprocket</b>		9T
<b>Riveted Adapter Available</b>	<b>Road type</b>	-
	<b>Bmx-Track type</b>	-
<b>Direct Attachment</b>		X
<b>Detachable Bracket</b>		-
<b>Wheel-Type Cable Guide</b>		-
<b>Fluoric Coated Link Bushings</b>		2
<b>Parallelogram Spring Adjuster</b>		-
<b>Sealed Bearing Guide Pulley</b>		-
<b>Sealed Bearing Tension Pulley</b>		-
<b>11T Pulley</b>		X
<b>Pulley Bolt Holder</b>		-
<b>Bracket Body</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Painted(Silver)
<b>Plate Body</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Painted(Silver)
<b>Outer Link</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Painted(Silver)
<b>Inner Link</b>	<b>Material</b>	Steel
	<b>Finish</b>	Zinc Plated
<b>Outer Plate</b>	<b>Material</b>	Steel
	<b>Finish</b>	Painted(Silver)
<b>Inner Plate</b>	<b>Material</b>	Steel
	<b>Finish</b>	Zinc Plated
<b>Removable Rubber Bumper</b>		-
<b>NOTE</b>		

## CS

<b>Model No.</b>		<b>CS-HG70-S</b>
<b>Type</b>		HG Cassette Sprocket
<b>Combination</b>	<b>Speed</b>	9
	9	26
	8	23
	7	20
	6	17
	5	15
	4	13
	3	11
	2	10
1	9	
<b>Group</b>		bc
<b>Chain</b>		Super Narrow HG for 9-speed
<b>Spider Arm</b>		-
<b>Lock Ring</b>		Steel
<b>Steel Cog</b>		X
<b>Ti Cog</b>		-
<b>Finish</b>		Sn-Co Plating
<b>Note</b>		Only for FH-F700

## SL

<b>Model No.</b>		<b>SL-F700(R)</b>
<b>Lever type</b>		Tap-Fire
<b>Front</b>	-	
	-	
<b>Rear</b>		9-speed SIS
<b>SL cable adjust</b>		X
<b>Optical gear display</b>		Above handlebar
<b>Multi-Bearing Construction</b>		-
<b>SL outer casing</b>		SP40 sealed
<b>Stainless SL cable</b>		X
<b>Flight Deck w/ Gear Sensor Compatible (Option)</b>		-
<b>W/ CI-DECK</b>		-
<b>SL Bracket</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Painted
<b>SL Compatible RD Type</b>		-
<b>Note</b>		

## BL

<b>Model No.</b>		<b>BL-F700</b>
<b>Brake type</b>		V-brake
<b>Lever size</b>		2 finger
<b>Brake cable type</b>		T-type
<b>Power adjuster</b>		-
<b>Servo-Wave Action</b>		-
<b>Reach adjust</b>		X
<b>Cable adjust</b>		X
<b>Brake lever</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Barrel
<b>Brake bracket</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Painted
<b>Note</b>		

## BR

<b>Model No.</b>		<b>BR-F700</b>
<b>Brake type</b>		V-brake
<b>Link Wire</b>		-
<b>Reinforced Link</b>		-
<b>Parallel link</b>		-
<b>Power Modulator</b>		X (Option)
<b>Linear Spring</b>		X
<b>Threaded BR Shoe Post</b>		X
<b>Brake shoe type</b>	<b>Standard</b>	R55C for F700
	<b>Optional choice</b>	-
		-
<b>Arch size</b>		-
<b>Fixing bolt length</b>		16/25mm
<b>Sleeve &amp; Bushing type</b>		X
<b>Lead Pipe Angle</b>		45/90/135
<b>Canti lever /V-arm /Caliper</b>	<b>Material</b>	Aluminum
	<b>Finish</b>	Painted
<b>Cartridge Shoe Holder</b>		X
<b>Note</b>		

# Capreo Specifications

## FC

Model No.		FC-F700
Rear Speeds		9
Chaining Combination		45T
Group		-
Spider or Gear Arm		5-arm
PCD (mm)		130mm
Crank Arm Length	160mm	-
	165mm	X
	167.5mm	-
	170mm	X
	172.5mm	-
175mm		-
Chain		Super narrow HG for 9-speed
Bottom Bracket		UN26(-K)
Axle Length	Chain Line 46	MM110
	Chain Line 48.5	LL113
	Chain Line 50	YL117
	Chain Line 52.5+t	117.5
Fixing Nut Available		-
Optional Chain Guard		Standard/Silver
Hollowtech Crank Arm		-
Splined Crank (OCTALINK)		-
One-key Release		-
Chain Case Compatible Crank Arm		-
Crank Arm	Material	Aluminum
	Finish	Painted(Silver)
Spider Arm		-
Spider Arm Cover		-
Outer Ring	Material	Aluminum
	Finish	Anodized
Middle Ring		-
Inner Ring		-
Note		

## HB

Model No.		HB-F700
Spoke Holes	24H	X
	28H	-
	32H	X
	36H	X
	40/48H	-
	Hole PCD (mm)	38
O.L.D. (mm)		100
Flange Distance		71.6
Axle	QR	X
	QR Skewer Length	133mm
	Axle Length	108mm (M9)
	Material	Steel
	Nut	-
Axle Length		-
Seal		X
Stainless Steel Ball Bearings		-
Strong Axle		-
Hub Shell	Material	Aluminum
	Finish	Anodized
CBN (Cubic Boron Nitride)	Cone Races	-
	Cup Races	-
Quick Release Lever	Material	Aluminum
	Finish	Anodized
Radial Lacing		X
Note		

## FH

Model No.		FH-F700
Spoke Holes	24H	X
	28H	-
	32H	X
	36H	X
	40/48H	-
Hole PCD (mm)		45
Freehub Body	Speeds	9
	11T compatible	9T
	Roller Clutch	-
	Material	Steel
O.L.D. (mm)	130	-
	135	X
	Others	-
Flange Distance		60.3
Dish		8.3
Axle	QR	X
	QR Skewer Length	168mm
	Length	146mm (M10)
	Nut	-
Seal	Length	-
	Material	Steel
	Hub	X
Hub Shell	Freewheel	-
	Material	Aluminum
Quick Release Lever	Finish	Anodized
	Material	Aluminum
CBN (Cubic Boron Nitride)	Cone Races	-
	Cup Races	-
Stainless Steel Ball Bearings		-
Thread for Drum Brake (BC1.37X24)		-
Note		Only for CS-HG70-S Only for 16-20inch

# Alfine Specifications

## SG

Model No.		SG-S501
Speeds		8
Color variation		Silver / Black
Silent Clutch		X
Gear Change Support Mechanism		X
Shifting Power Modulator		X
Driving Efficiency		HIGH
Brake		BR-S501 Shimano Center Lock type
Over Locknut Dim. /OLD (mm)		135
Axle Length (mm)		187
Gear Ratio	Total	307%
	1	0.527
	2	0.644
	3	0.748
	4	0.851
	5	1
	6	1.223
	7	1.419
	8	1.615
Hub Shell Material		Aluminum
Finish		Anodized
Weight		1680g
Spoke Hole		36/32H
Spoke Size		#13 / #14
Flange Distance (mm)		57.3
Spoke Hole PCD (mm)		92.6
Flange Diameter (mm)		104.3
Flange Width (mm)		3.2
Sprocket Teeth		18T,20T(CS-S500), for tensioner use  16T,18T,19T,20T,21T,22T, 23T ( for w/o tensioner use )
Sprocket Thickness (mm)		2mm ( CS-S500 ) 2.3mm ( SM-GEAR )
Chain Size		Super Narrow HG for 9-speed for CS-S500 use  HG for SM-GEAR
Recommended Chain		CN-HG53 / CN-S500
Chain Line (mm)		41.8
Dishing Distance (mm)		3.15
Shifting Lever/Al		SL-S500(ST,SL,SB-8S20)
Cassette Joint / Motor Unit		CJ-8S20/CJ-8S40
Note		

## CT

Model No.	CT-S500	CT-S510
Color Variation	Silver/ Black	Silver&Black ( 1kind )
Speeds	Single	Single
Compatible CS	CS-S500	CS-S500 / SM-GEAR
Max Front Difference	16T	-
Max.Rear Sprocket	20T(CS-S500)	23T(SM-GEAR)
Min.Rear Sprocket	18T( CS-S500 )	16T ( SM-GEAR )
Dropout	Vertical drop end type	Vertical drop end type
Direct Attachment	-	-
Structure	Double pulley	Single pulley
Material	Aluminum	Aluminum
	Painted	Painted
Note		

## CS

Model No.	CS-S500
Chain drop protection	X
Gear Teeth	18T,20T
Chain	Super Narrow HG for 9s
Assembling way with SG	same as Inter-8
Finish	Ni-plated
Note	

## SL

Model No.	SL-S500	
Color Variation	Silver / Black	
Lever type	Rapidfire plus	
Front	*	
Rear	8 speed (Inter-8 pitch)	
SL cable adjust	X	
Optical gear display	Above handlebar	
Multi-Bearing Construction	-	
SL Outer Casing	SP41 sealed	
Stainless SL Cable	X	
Flight Deck w/ Gear Sensor Compatible(Optional)	-	
W/ CI-DECK	-	
SL Bracket	Material	Aluminum
	Finish	Painted
SL Compatible SG Type	SG-S501,INTER-8	
Note	*Front Lever available	



## Alfine Specifications

### BL

Model No.	BL-S500	BL-S502
Color Variation	Silver / Black	Silver / Black
Brake Type	Hydraulic Disc-brake	Hydraulic Disc-brake
Recommended Brake Caliper	BR-S501	BR-S501
Oil	Mineral	Mineral
Master Cylinder	X	X
Finger	4 finger	2.5 finger
Brake Lever	Material	Aluminum
	Finish	Anodized
Brake Bracket	Material	Aluminum
	Finish	Painted
Brake Hose	SM-BH59	SM-BH59
Note		

### FC

Model No.	FC-S500				FC-S400			
Color Variation	Silver / Black				Silver / Black			
Chain Ring Teeth	45T		39T		45T		39T	
Chain guard type	Double	Single	Double	Single	Double	Single	Double	Single
Chain line	49.2mm	42.7mm	49.2mm	42.7mm	49.2mm	42.7mm	49.2mm	42.7mm
Chain Type	Super Narrow HG for 9-speed S500 use				Super Narrow HG for 9-speed for CS-S500 use			
	HG ( for SM-GEAR use )				HG ( for SM-GEAR use )			
Crank Length	170mm				170mm			
2-piece solid crank construction	X				-			
OCTALINK technology	-				X			
Bottom Bracket	Included SM-FC4500				BB-ES25			
Chain Ring	Material	Aluminum			Aluminum			
	Finish	Anodized			Anodized			
Crank Arm	Material	Aluminum			Aluminum			
	Finish	Anodized			Painted			
Note								

### BR

Model No.	BR-S501	
Color Variation	Silver / Black	
Brake Type	Disc-brake	
Recommended Brake Lever	BL-S500 / BL-S502	
Recommended Brake Rotor	SM-RT64	
Hydraulic or Mechanical	Hydraulic	
Oil	Mineral	
Mount Type	International standard Post-type	
Piston	Opposed 4-piston	-
	Opposed 2-piston	X
	Different Piston Size	-
	1-piston	-
Caliper	Material	Aluminum
	Finish	Painted
PAD	Standard	A01S Resin
	Option	-
Hose	SM-BH59	
Note		

# Nexus Di2 (Cyber Nexus) Specifications

## AI

Series	Nexus
Model No.	AI-8S40
Capacitor for Better Shifting, Suspension & Lighting	X
Automatic Light Sensor	X
Shifting Timing Adjuster SW	X
Position to be fixed	Below down tube, near BB part
Way of Fixing	M5 screw x 2
Speed Signal Input	DH-3NB1-QR DH-3RB1-QR
Power Supply	DH-3NB1-QR DH-3RB1-QR
Production Factory	

## MU

Series	Nexus
Model No.	MU-8S40
Type	Same type of AUTO-D
Compatible Hub Gear	SG-8R56 / 8C56
Production Factory	

<b>DH</b>	<b><u>DH-3RB1/3NB1</u></b> <Refer to Page150-151>
<b>EW</b>	<b><u>EW-AA/AB/AC/DD</u></b> <Refer to Page81>
<b>FS</b>	<b><u>FS-C810/C812</u></b> <Refer to Page78>
<b>SC</b>	<b><u>SC-8S40</u></b> <Refer to Page142>
<b>SG</b>	<b><u>SG-8R56/8C56</u></b> <Refer to Page158>
<b>SW</b>	<b><u>SW-8S40</u></b> <Refer to Page80>

# Inter-8 Specifications

Function Name	Inter-8							
Model No.	SG-8R31	SG-8R36	SG-8R31-VS	SG-8R36-VS	SG-8C31	SG-8R56	SG-8R56-VS	SG-8C56
Speeds	8				8	8		8
Silent Clutch	X				X	X		X
Gear Change Support Mechanism	X				X	X		X
Shifting Power Modulator	X				X	X		X
Driving Efficiency	Standard	HIGH	Standard	HIGH	Standard		HIGH	HIGH
w/ Left hand dust cap	- ( Inter-M )	- ( Inter-M )	X	X	-	- ( HRB )	X	-
Brake	Inter-M		V-Brake		Coaster	Inter-M		Coaster
	BR-IM41/50//70/80-R					BR-IM41/50/ 70/ 80-R		
Over Locknut Dim. /OLD (mm)	132				132.3	132.9		133.2
Axle Length (mm)	184				184	184.9		184.9
Gear Ratio	Total	307%			307%	307%		307%
	1	0.527			0.527	0.527		0.527
	2	0.644			0.644	0.644		0.644
	3	0.748			0.748	0.748		0.748
	4	0.851			0.851	0.851		0.851
	5	1			1	1		1
	6	1.223			1.223	1.223		1.223
	7	1.419			1.419	1.419		1.419
	8	1.615			1.615	1.615		1.615
Hub Shell Material	Aluminum				Aluminum	Aluminum		Aluminum
Finish	Painted				Painted	Painted		Painted
Weight	1750g	1630g	1775g	1655g	2040g	1630g	1655g	2040g
Spoke Hole	36/32H	36H	36/28H	36H	36H	36H		36H
Spoke Size	#13 / #14				#13 / #14	#13 / #14		#13 / #14
Flange Distance (mm)	58.3				58.3	58.3		58.3
Spoke Hole PCD (mm)	92.6				92.6	92.6		92.6
Flange Diameter (mm)	105.2				105.2	105.2		105.2
Flange Width (mm)	3.2				3.2	3.2		3.2
Sprocket Teeth	16T,18T,19T,20T,21T,22T,23T				16T,18T,19T,20T,21T,22T,23T	16T,18T,19T,20T,21T,22T,23T		16T,18T,19T,20T,21T,22T,23T
Sprocket Thickness (mm)	2.3				2.3	2.3		2.3
Chain Size	1/2"x1/8" or 1/2"x3/32"				1/2"x1/8" or 1/2"x3/32"	1/2"x1/8" or 1/2"x3/32"		1/2"x1/8" or 1/2"x3/32"
Shimano Recommended Chain	CN-NX10( 1/2"x1/8" )				CN-NX10( 1/2"x1/8" )	CN-NX10( 1/2"x1/8" )		CN-NX10( 1/2"x1/8" )
Chain Line (mm) 16-23T	42.7/47.7				42.85/47.85	42.25		42.4
Dishing Distance (mm)	2.7				2.55	3.15		3
Shifting Lever/AI	SB-8S20/ST-8S20/SL-8S20 (SL-S500)				SB-8S20/ST-8S20/SL-8S20 (SL-S500)	AI-8S40		AI-8S40
Cassette Joint / Motor Unit	CJ-8S20/CJ-8S40				CJ-8S20/CJ-8S40	MU-8S40		MU-8S40
Note	* CN spec:1/2"x3/32" is not available from shimano. In case of tensioner use, we recommend 1/2"x3/32" to prevent noise problem					* CN spec:1/2"x3/32" is not available from shimano. In case of tensioner use, we recommend 1/2"x3/32" to prevent noise problem		

# Inter-7 Specifications

Function Name		Inter-7		
Model No.		SG-7R46		SG-7C18
Speeds		7		
Silent Clutch		-		
Gear Change Support Mechanism		-		
Shifting Power Modulator		X		
Brake		Inter-M		Coaster
		BR-IM41/50/70/80-R		
Over Locknut Dim. / OLD (mm)		130	130	127
Axle Length (mm)		182	201	175.5
Gear Ratio	Total	244%		
	1	0.632		
	2	0.741		
	3	0.843		
	4	0.989		
	5	1.145		
	6	1.335		
	7	1.545		
Hub Shell Material		Aluminum		Steel
Corrosion Resistant Finish		X	X	X
Weight		1465g		1860g
Spoke Hole		36H / 32H		36H
Spoke Size		#13 / #14		
Flange Distance (mm)		54.6		56.2
Spoke Hole PCD (mm)		87		83.5
Flange Diameter (mm)		99.6		92.5
Flange Width (mm)		3.2		2.7
Sprocket Teeth		16T, 17T, 18T, 19T, 20T, 21T, 22T, 23T		
Sprocket Thickness (mm)		2.3		
Chain Size		1/2"x1/8" or 1/2"x3/32"		
Recommended Chain		CN-NX10( 1/2"x1/8" )		
Chain Line(mm)	16T	45.3		46.5
	18-23T	40.3 / 45.3		41.5 / 46.5
Dishing Distance (mm)		3.85		4.6
Shifting Lever		SB-7S45, SL-7S20		
Cassette Joint		CJ-NX10 / CJ-NX40		
Note		* CN spec:1/2"x3/32" is not available from shimano. In case of tensioner use, we recommend 1/2"x3/32" to prevent noise problem		

# Inter-3 Specifications

Function Name	Inter-3						
Model No.	SG-3R40		SG-3C41		SG-3D55		
Speeds	3				3		
Silent Clutch	-				X		
Gear Change Support Mechanism	X				X		
Shifting Power Modulator	X				X		
Super Light Shifting	X				X		
Brake	Inter-M		Coaster		Disc Brake		
	BR-IM41-R/ BR-IM31-R						
Over Locknut Dim. / OLD (mm)	120.4/120.4	126.8	120/120	127.4	135		
Axle Length (mm)	170.3/189.4	176.8	168/178	175	192.6		
Gear Ratio	Total	186%				186%	
	1	0.733				0.733	
	2	1.000				1.000	
	3	1.360				1.360	
Hub Shell Material	Steel				Aluminum		
Corrosion Resistant Finish	X				Clear/Black		
Weight	885g		1120g		945g		
Spoke Hole	36H / 32H / 28H		36H / 28H		32H		
Spoke Size	#13 / #14				#13 / #14		
Flange Dist. (mm)	53	53	57.5	57.5	53.5		
Spoke Hole P.C.D (mm)	74	74	59	59	65		
Flange Diameter (mm)	84	84	67.5	67.5	77.6		
Flange width (mm)	2.3				3.2		
Sprocket Teeth	15T, 16T, 18T, 19T, 20T, 21T, 22T, 23T				*		
Sprocket Thickness (mm)	2.3				2.0 (for CS-S500) /2.3 (for SMGEAR)		
Chain Size	1/2"x1/8" or 1/2"x3/32"				1/2"x1/8" or 1/2"x3/32" /HG		
Recommended Chain	CN-NX10( 1/2"x1/8" )				CN-NX10( 1/2"x1/8" ) / CN-HG40		
Chain Line(mm)	15T	42.2	40.5	43.7	42.2	44.5	
	16T	-/44.7	-/43	-/46.2	-/44.7	42/47**	
	18-23T	39.7/44.7	38/43	41.2/46.2	39.7/44.7		
	CS-S500	-	-	-	-	42	
Dishing Distance (mm)	0.8	2.5	1.2	2.7	1.67		
Shifting Lever	SL-3S35E, SL-3S41E, SL-3S42E				SL-3S35E,SL-3S41E,SL-3S42E		
Cassette Joint	BELL CRANK 6				BELL CRANK 6		
Note					*15T, 16T, 18T, 19T, 20T, 21T, 22T, 23T(SMGEAR for w/o tensioner use) / 18T, 20T (CS-S500) for tensioner use **16T-23T Chain Line(mm) : 42/47		

# AI Specifications

<b>Function Name</b>	<b>AUTO-D</b>
<b>Model No.</b>	<b>AI-8S40</b>
<b>Speeds</b>	8
<b>Information Display</b>	SC-8S40
<b>Display Type</b>	LCD
<b>Automatic Shifting</b>	X
<b>Number of Automatic mode</b>	3(L/D/Ds) x 8
<b>Auto Light Function</b>	X
<b>Beep Sound</b>	X
<b>Power Supply</b>	DH-3NB1/ DH-3RB1
<b>Speed Signal Input</b>	DH-3NB1/ DH-3RB1
<b>Main Unit Position</b>	Below down tube by using 2 pcs of M5 screw
<b>SG</b>	SG-8R56 SG-8C56
<b>Note</b>	

# SB/SL/ST Specifications

Function Name	Inter-S										
Model No.	SB-8S20	SL-8S20	ST-8S20	SL-S500	SB-7S45	SL-7S20	SL-7S10	SL-3S90	SL-3S60	SM-3S60	SL-3S42J
Speeds	8	8	8	8	7	7	7	3	3	-	3
Shifter Type	Revo	Revo	Tap fire	Rapid fire plus	Revo	Revo	Revo	Piano touch	Revo	-	Revo
Optical Gear Display	Window	Window	Dial	Window	Dial	Window	Dial	Dial	Window type with O.G.D light	-	Window
Max Number of Shift	7	7	1	1	6	6	6	2	2	-	2
LED positioning light	-	-	-	-	-	-	-	-	X	X	-
Brake Lever Integrated	X	-	X	-	X	-	-	-	-	-	-
Brake Lever Size	4 Finger	-	3 Finger	-	3 Finger	-	-	-	-	-	-
Left Hand Brake Lever	BL-IM60	-	BL-IM65	-	BL-IM45	-	-	-	-	-	-
Clamping Diameter	22.2mm	22.2mm	22.2mm	22.2mm	22.2mm	22.2mm	22.2mm	22.2mm	22.2mm	22.2mm	22.2mm
Inner Cable Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Steel	Steel	-	Stainless Steel
SL Outer Cable Cap	Sealed	Sealed	Sealed	Sealed	Sealed	Sealed	Sealed	Normal	Normal	-	Sealed
Note								* Japanese market only	* Japanese market only	*L/H position light / Japanese market only	* Japanese market only

# SB/SL/ST Specifications

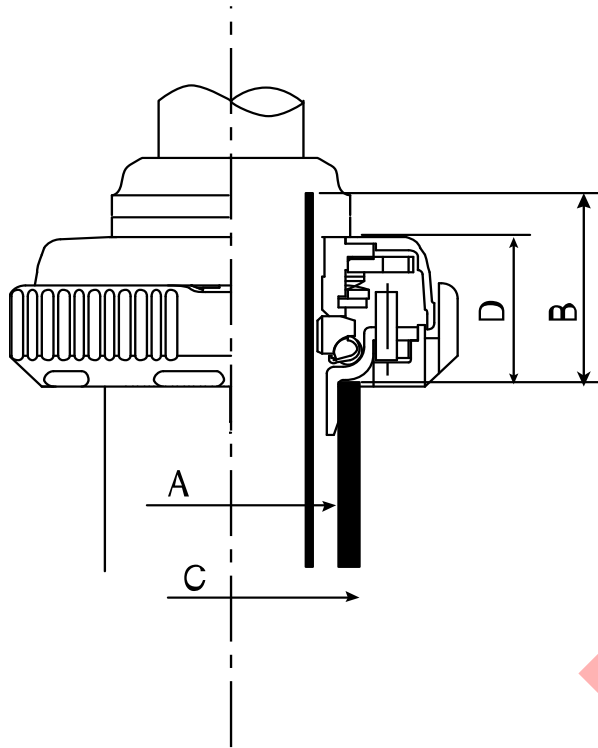
Function Name	Inter-S			
	SL-3S35J	SL-3S35E	SL-3S41E	SL-3S42E
Speeds	3	3	3	3
Shifter Type	Revo	Revo	Revo	Revo
Optical Gear Display	Dial	Dial	Window	Window
Max Number of Shift	2	2	2	2
LED positioning light	-	-	-	-
Brake Lever Integrated	-	-	-	-
Brake Lever Size	-	-	-	-
Left Hand Brake Lever	-	-	-	-
Clamping Diameter	22.2mm	22.2mm	22.2mm	22.2mm
Inner Cable Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
SL Outer Cable Cap	Sealed	Sealed	Sealed	Sealed
Note	* Japanese market only		Grip width : Short	Grip width : Long



# Front Chainwheel Specifications

<b>Function Name</b>		<b>Inter-C</b>	
<b>Model No.</b>		<b>FC-NX75</b>	
<b>Chain Ring Teeth</b>		33T	38T
<b>Chain Line</b>		44±1+ t mm	
<b>Chain Type</b>		1/2"X3/8" or 1/2"X3/32"	
<b>Crank Length</b>		170mm	
<b>BB</b>	<b>With Chaincase Stay</b>	BB-UN26-K YL117	
	<b>Without Chaincase Stay</b>		
<b>Chain Ring</b>	<b>Material</b>	Steel	
	<b>Finish</b>	Black	
<b>Cover Ring Diameter</b>		95.5mm	
<b>Crank Arm</b>	<b>Material</b>	Alumium	
	<b>Finish</b>	Painted	
<b>Note</b>		t : chain case thickness *Both of spec with bolt and spec w/o bolt are available.	

## Others. Specifications



<b>Function Name</b>	<b>Nexus Headset</b>
<b>Model No.</b>	<b>HP-NX10</b>
<b>A</b>	$\phi 29.85 - 30.0\text{mm}$ or $\phi 30.01 - 30.2\text{mm}$
<b>B</b>	30.5 - 31.5mm
<b>Front Fork Stem Thread Size</b>	BC 1" X 24 T.P.I
<b>C</b>	$\phi 38\text{mm}$ ( Max. )
<b>D</b>	21.7mm
<b>Head Tube Material</b>	Steel

<b>Function Name</b>	<b>Nexus Chain</b>
<b>Model No.</b>	<b>CN-NX10</b>
<b>Size</b>	1/2x3/8"
<b>Function</b>	Anti corrosion

