SUNRACE DRIVEN

2008~2009

Product Catalogue

Introduction

















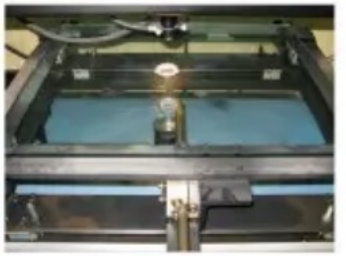




Sun Race Sturmey-Archer, manufacturer of bicycle transmission drivetrain systems, proudly introduce our new top of the line Driven groups for both the mountain and road range.

Among many other new products, we hope to bring you exceptional value with no compromise, performance oriented components in 2008-2009.







Top of the Line Driven Mountain group.
With the use of exotic materials such as carbon, titanium, and 7075 aluminum, the NMZ group is the epitome of the Driven mountain range. High tech finishes like T.A.N.™ (titanium-aluminum-nitride) and titanium nitride can also be found throughout the group.

- Integrated Front Chainwheel with carbon reinforced crank arm and titanium axle with 7075 chainrings and bolts & nuts.
- Rear Derailleur with alloy links, carbon cage, sealed cartridge 7075 pulleys, and 7075 bracket bolt.
- Cassette with alloy lockring on 7075 3-piece spider body with T.A.N.™ or titanium-nitride coating.
- Hubs with 7075 carrier and titanium axle (XC).
- Chain with hollow pins & plates and coated with titanium-nitride.



The MX group is the entry into the Driven mountain range of products. Featuring a no nonsense use of lightweight materials, the MX group is designed to handle the worst that any racecourse can throw at it.

- Integrated Front Chainwheel with 7075 chainrings and bolts & nuts.
- Rear Derailleur with alloy link-cage, sealed cartridge 7075 pulleys, and 7075 bracket bolt.
- Cassette with alloy lockring on 7075 3-piece spider body with satin finish.
- Hub with 7075 carrier.
- Chain with hollow pins & plates and coated with chrome.

2008 New Products



The new Driven RZ group is our professional level of road components. Tearing a page from the NMZ Mountain range, the NRZ group uses the same mix of exotic materials. From carbon, titanium, 7075 aluminum, to ceramic coating, the NRZ road range is designed to handle the rigors of a professional race course.

- Shifter brake lever with carbon reinforced brake lever and 7075 up-shift lever.
- Front Derailleur with carbon reinforced cage.
- Rear Derailleur with carbon reinforced link and cage with sealed cartridge 7075 pulleys and 7075 bracket bolt.
- 7075 CNC Cassettes with alloy lockring and ceramic coating.
- Chain with hollow pins & plates and coated with titanium-nitride.



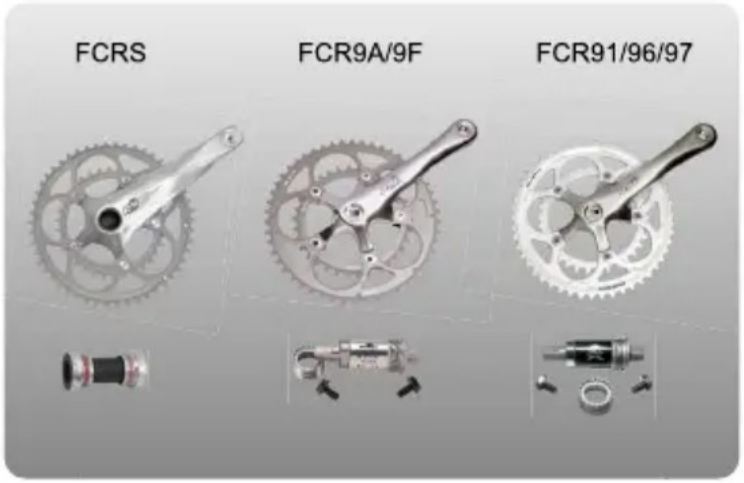
The Driven RX group is the portal into the Driven road range of products.Built for serious and competitive riders alike, NRX delivers the same performance and functionality as NRZ using a mix of different materials and finishes.

- Shifter brake lever with alloy brake lever and up-shift lever.
- Integrated Front Chainwheel with 6061 crank arm and 7075 chainrings and bolts & nuts.
- Front Derailleur with forged alloy links.
- Rear Derailleur with alloy links and cage with sealed cartridge 7075 pulleys and 7075 bracket bolt.
- Chain with hollow pins & plates and coated with chrome.



New Front Chainwheels for mountain series

- FCM99, FCM98 and FCM97 of M90 Avantgarde series, integrated Front Chainwheels, for performance 9 speed,
- FCM9Q, FCM9R and FCM9S of M90 series, integrated Front Chainwheels for 9 speed.
- FCM9A and FCM9B of M90 series, traditional square taper Front Chainwheels for 9 speed.

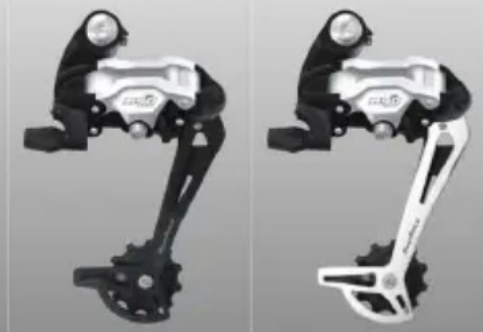


New Front Chainwheels for road series

- FCRS of RS series, integrated Front Chainwheels for 10 speed.
- FCR9A, FCR9F, FCR91, FCR96 and FCR97 of R90 series, Front Chainwheels for 9 speed.

2008 New Products

RDM97



New M90 Rear Derailleur, RDM97

- Alloy links and steel cage
- 9 speed 11-34 range
- New light weight design
- 2:1 ratio

RDRS RDR90 RDR86



New Rear Derailleurs for road series.

- RDRS - all alloy construction with 7075 bracket bolt for 10/9 speed.
- RDR90 - alloy links and steel cage for 9 speed.
- RDR86 - alloy links and steel cage for 8 speed.
- 2:1 ratio



FDRS/90/97/99/80/87



New Front Derailleurs for road series

- FDRS - 10 speed 56~50T Double
- FDR90 - 9 speed 56~50T Double
- FDR97 - 9 speed 52T Triple
- FDR99 - 9 speed 50T Triple
- FDR80 - 8 speed 56~50T Double
- FDR87 - 8 speed 52T Triple
- Forged alloy with high polished chrome finish
- Braze-on mounting available.

STRS/90/80



New Road Shifter-Brake Lever combo.

- STRS - 10 x 2 speed
- STR90 - 9 x 3 or 9 x 2 speed
- STR80 - 8 x 3 or 8 x 2 speed
- Unique dual lever design that is easy to use.
- Ergonomically shaped hood for easy holding.
- Forged alloy brake lever.
- 2:1 ratio

2008 New Products



New Brake Caliper for road series.

- BCRS - forged alloy with quick-release, cartridge shoe pads with convex adjusting washers.
- BCR90 - forged alloy with quick-release and cartridge shoe pads.
- BCR80 - forged alloy with quick-release.
- High polished with anodized finish.



New Bottom-Brackets for mountain and road.

- Cartridge bearings
- ISIS or square taper
- Multiple level with different materials
- Crank bolts options available.

CONTENT

NMZ



P.13

Driven MZ, top of the line 27 speed MTB components.

NMX



P.14

Driven MX, race ready no holds barred 27 speed MTB components.

M90 Avantgarde



P.15

Sun Race performance 27 speed MTB group.

M90 SunRACE



P.16

Sun Race entry 27 speed MTB group.

CONTENT

M60 SunRACE



Sun Race performance 24 speed MTB group. P.17

M50 SunRACE



Sun Race entry 24 speed MTB group. P.18

M40 SunRACE



Sun Race MegaDrive 21 speed MTB group. P.19

M30 SunRACE



Sun Race 21/18 speed MTB group. P.20

CONTENT

M20 SUNRACE



P.21

Sun Race entry 21/18 speed MTB group.

M05 SUNRACE



P.23

Sun Race friction 21/18/15 speed MTB group.

NRZ



P.25

Driven RZ, top of the line 10x2 speed Road group.

NRX



P.26

Driven RX, race ready no holds barred 10x2 speed Road group

CONTENT

RS SUNRACE



P.27

Sun Race performance 10x2 speed Road group.

R90 SUNRACE



P.28

Sun Race performance 9x2 or 9x3 speed Road group.

R80 SUNRACE



P.29

Sun Race 8x2 or 8x3 speed Road group.

R30 SUNRACE



P.30

Sun Race 7x2, 6x2, 5x2 speed Road group.



CONTENT



P.31

Sun Race friction Road group.

Other - Chains & Casings P.33

After Market P.34

Service Parts P.35

MTB

Trigger Shifters P.37

Twist Shifters P.38

Thumb Shifters P.39

Front Derailleurs P.40

Front Chainwheel P.41

Cassetters P.48

Freewheels P.51

Rear Derailleurs P.53

Hubs P.59

ROAD

ST Shifters Brake Lever P.60

Thumb Shifters P.61

Front Derailleurs P.62

Front Chainwheel P.63

Cassetters P.66

Freewheels P.68

Rear Derailleurs P.68

Brake Lever & Callper P.70

Bottom Bracket Set P.71

Chains P.73

Outer Casing P.75

Specifications

SUNRACE



HBMZ7 F/R9
[Titanium QR Axle]
[7075 Cassette Carrier]
[Sealed Cartridge Bearings]
[197.5/342.5g incl. QR]



FCMZ7 44-32-22T
[Carbon Reinforced Crank]
[Titanium Axle]
[7075 Chainrings]
[7075 Bolts & Nuts]
[847.5g incl. BB]



CNM9Z [Hollow Pins & Plates]
T[Titanium-Nitride]
[255g/110L]



BBMZ
[Int. BB FCMZ]
[93g]





CSMD7 8AT 11-30T
8AS 11-28T
[Alloy Spoke Guard]
[6061 Lockring]
[Alloy Spacers]
[9-Speed Spacing]
[387.5~406g incl. Alloy Guard]









[P]
P[Titanium-Alloy-Nitride]



[T]
T[Titanium-Nitride]

CSMZ7 9AV 11-34T
9AU 11-32T
[7075 3-Piece Spider]
[6061 Lockring]
[273~287g]



RDMZ LD/MD
[Carbon Cage]
[Forged Alloy Links]
[7075 Pulleys]
[Sealed Cartridge Bearings]
[223g]



HBMD7 F/R9
[Through Axle Type]
[7075 Cassette Carrier]
[Sealed Cartridge Bearings]
[386.5/694.5g incl. QR]



HBMX7 F/R9
[7075 Cassette Carrier]
[Sealed Cartridge Bearings]
[206.5g/354.5g incl. QR]



FCMX7 44-32-22T
[6061 Forged Alloy Crank]
[Chromoly Axle]
[7075 Chainrings]
[7075 Bolts & Nuts]
[779g incl. BB]



BBMX
[Int. BB FCMX]
[93g]



CNM9X [Hollow Pins & Plates]
S[Chrome]
[255g/110L]







CSMX7 9AV 11-34T
9AU 11-32T
[7075 3-Piece Spider]
[6061 Lockring]
S[Satin]
[273~287g]



CSMX5 9AV 11-34T
9AU 11-32T
[6061 Lockring]
[Alloy Spacers]
S[Satin]
[341~361g]



RDMX LD/MD
[7075 Pulleys]
[Forged Alloy Links]
[Alloy Cage]
[Sealed Cartridge Bearings]
[236g]







M90 Avantgarde



DLM93 R9/L3
S[Silver]/B[Black]
[Alloy Up-Shift Lever]



FCM99 [7075 44-32-22T]
FCM98 [7075 44-32T]
FCM97 [7075 44T]
44-32-22T

BBM97
[Int. BB FCM99/98/97]

BBM9S
[Int. BB FCM9Q/9R/9S]



FCM9Q [7075 44-32T]
FCM9R [7075 44T]
FCM9S
44-32-22T



FCM9A [7075 44T]
FCM9B
44-32-22T
[Square Taper]

BBS15-BSG
[BC-68/113mm]



CSM96 9AV 11-34T
9AU 11-32T
S[Satin]
[Light Weight Design]



HBM96 F/R9



CNM99 [Hollow Pins]
S[Chrome]/Y[Gray]



FDM97 LD/MD/SD
[44-32-22T or 48-36-26T]
[Alloy Body]
[Dual Pull]

FDM96 LD/MD/SD
[44-32-22T or 48-36-26T]
[Alloy-Steel Body]
[Dual Pull]



B[Black]



S[Silver]

RDM97 LD
[Alloy Links]



DLM90 R9/L3
[Composite Shift Levers]



FCM94 42-32-22T [1]
[Alloy 1-Piece Crank]
[Removable Chainrings]
[SCM435 Bolts & Nuts]



BBS15-BSG
[BC-68/113mm]



FDM90 LD/MD/SD
[42-32-22T]
[Alloy-Steel Body]
[Dual Pull]



CSM9S 9AU 11-32T
U[UCP]
[Light Weight Design]



MFM90 9CU 13-32T
U[UCP]/C[CP]
[Lockring Design]
[Light Weight Design]



CNM94
S[Chrome]/Y[Gray]



RDM90 LD
[Alloy Outer Link]
[13T Tension Pulley]

M60



TSM63 R8/R7/L3/LF
[Force Adjuster]
[Alloy C-Clamp]



HBM63 F/R8



FCM63 42-32-22T [M]
[Alloy I-Crank]



BBS15-BSK
[BC-68/118.5mm]



CSM66 8AV 11-34T
8AU 11-32T
8AS 11-28T
8BV 12-34T
8BU 12-32T

CSM63 7AV 11-34T
7AS 11-28T
7BS 12-28T

S[Satin]
[Light Weight Design]



MFM60 8CV 13-34T
8CU 13-32T
U[UCP]/C[CP]
[Lockring Design]
[Light Weight Design]



FDM67 LD/MD/SD
[42-32-22T]
[Alloy Clamp]
[Dual Pull]

FDM66 LD/MD/SD
[42-32-22T]
[Alloy-Steel Clamp]
[Dual Pull]



RDM63 LD
[Magnesium Outer Link]
[Alloy Outer Cage]
[13T Tension Pulley]



CNM89 [Hollow Pins]
S[Chrome]/Y[Gray]





DLM53 R8/R7/L3
[Alloy Up-Shift Lever]



DLM33 R8/R7/L3
[Composite Levers]



TSM53 R8/L3/LF
[Cyclop Display]
[Alloy C-Clamp]



HBM53 F/R8



FCM52 42-34-24T
[Alloy I-Crank]
[M]



BBS15-BSN
[BC-68/122mm]



FDM56 LD/MD/SD
[42-34-24T]
[Alloy-Steel Clamp]
[Dual Pull]



RDM56 LD
[Alloy Outer Link]
[13T Tension Pulley]



CSM56 8AU 11-32T
U[UCP]
[Light Weight Design]



CSM53 8BS 12-28T
C[CP]
[Light Weight Design]



MFM56 8CV 13-34T
U[UCP]
[Lockring Design]



CNM84
S[Chrome]/Y[Gray]

M40 SunRACE



TSM4S R7/L3
[Cyclop Display]
[Alloy C-Clamp]



FCM5S 42-34-24T



BBS15-BSU
[BC-68/127mm]



FDM56 LD/MD/SD
[42-34-24T]
[Alloy-Steel Clamp]
[Dual Pull]



FCM5A 42-34-24T
[Alloy Crank]



BBS15-BSN
[BC-68/122mm]



RDM4S XD/XB
[Mega 15T Tension Pulley]
[Index Cable Adj.]



MFM4S 7CV 13-34T
U[UCP+Black Combination]
[Lockring Design]
[Light Weight Design]



[2]

MFM2A 7DV 14-34T
3[UCP+Black Combination]
2[Brown+Black Combination]
[Lockring Design]



HBM40 F/R8/R7
[QR or Nutted Type]



CNM54
Y[Gray]/B[Black]



DLM33 R8/R7/L3
[Composite Shift Levers]



FCM33 48-38-28T [M] [1]
[Alloy I-Crank]



TSM33 R7/R6/L3/LF
[Cyclop Display]



FCM31 48-38-28T [M] [1]
[Alloy A-Crank]



MFM30 7CS 13-28T
C[CP]
[Lockring Design]
[Light Weight Design]



MFM3S 7CS 13-28T
U[UCP]
[Lockring Design]
[Light Weight Design]



MFM20 6DS 14-28T
U[UCP]
[Light Weight Design]



BBS15-BSU
[BC-68/127mm]



FDM34 LD/MD/SD
[48-38-28T]
[Alloy-Steel Clamp]
[Dual Pull]



RDM33 SD/SB
[6-Speed]
[Index Cable Adj.]



RDM33 LD/LB
[7-Speed]
[Index Cable Adj.]



CNM54
Y[Gray]/B[Black]



21 speed Performance

SUNRACE

M20 SUNRACE



TSM26 R7/R6/R5/LF
[Cable Ajuster]
[Light Action Shift - Dual Ways]
[TPR Grip]



TSM23 R7/R6/R5/LF
[Light Action Shift - Dual Ways]
[TPR Grip]



FCM2B 48-38-28T
FCM2C 42-34-24T



FCM2A 48-38-28T
FCM2S 42-34-24T [4-Arm]



BBS05-BSI [BC-68-117.5mm]
*[FCM2B/2C]

BBS05-BSQ [BC-68/124mm]
*[FCM2A/2S]



FDM2S
SB/ST/MB/MT
[42-34-24T]
[Heat Treated Chainguide]



FDM2A
SB/ST/MB/MT
[48-38-28T]
[Heat Treated Chainguide]



RDM15 LD/LB
SD/SB
[5-Speed]
[Index Cable Adj.]



RDM2T LD/LB
SD/SB
[7 & 6-Speed]
[Index Cable Adj.]





TSM2S R7/R6/R5/LF
[TPR Grip]



SLM2T R7/R6/R5/L3/LF



FDM2B [48-38-28T]
FDM2C [42-34-24T]
SB/ST/MB/MT
[Friction]



RDM2B LD/LB
[7 & 6-Speed]



CNM54
Y[Gray]/B[Black]



[3]



[2]

MFM2A 7DV 14-34T
3[UCP+Black Combination]
2[Brown+Black Combination]
[Lockring Design]



[1]



[2]

MFM2A 7DS 14-28T
6DS 14-28T
5DS 14-28T
1[UCP+Black Combination]
2[Brown+Black Combination]
[Lockring Design]



MOS SUNRACE



TSM2S RF/LF



SLM10 RF/LF



MFM05 7DS 14-28T
6DS 14-28T
5DS 14-28T



FDM06 SB
[Double]



FDM05 SB/MB
[48-38-28T]



RDM10 LD/LB



CNM22


SUNRACE
www.sunrace.cz
KUFO
KUFO
BEHR

RZ



STRZ RT/L2
[Carbon Reinforced Brake Lever]
[7075 Forged Alloy Up-Shift Lever]
[409g/pair]



CSRZ TAO 11-23T
TBO 12-23T
TBQ 12-25T
M[Ceramic Coated]
[105~120g]



FCRZ6 50-34T FCRZ1 53-39T
Z7 50-36T Z3 52-39T
[BCD 110mm] [BCD 130mm]
[Carbon Crank]
[Titanium Axle]
[7075 Chainrings]
[7075 Bolts & Nuts]
[782~792g incl. BB]



FDRZ BB
[56~50T Double]
[Carbon Reinforced Cage]
[Forged Alloy Links]
[101.5g]



CNR 1Z [Hollow Pins & Plates]
T[Titanium-Nitride]
[242g/110L]



BBRZ
[Int. BB FCRZ]
[93g]



RDRZ SD
[Carbon Reinforced Link]
[Carbon Reinforced Cage]
[7075 Pulleys]
[Sealed Cartridge Bearings]
[7075 Bracket Bolt]
[10 & 9-Speed]
[202g]



STRX RT/L2
[Forged Alloy Brake Lever]
[7075 Forged Alloy Up-Shift Lever]
[418g]



FCRX6 50-34T FCRX1 53-39T
X7 50-36T X3 52-39T
[BCD 110mm] [BCD 130mm]
[6061 Forged Alloy Crank]
[Chromoly Axle]
[7075 Chainrings]
[7075 Bolts & Nuts]
[826–889g incl. BB]



BBRX
[Int. BB FCRX]
[93g]



CNR 1X [Hollow Pins & Plates]
S[Chrome]
[242g/110L]



FDRX BB
[56–50T Double]
[Forged Alloy Links]
[98.5g]



RDRX SD
[Alloy Links & Cage]
[7075 Pulleys]
[Sealed Cartridge Bearings]
[7075 Bracket Bolt]
[10 & 9-Speed]
[197.5g]





STRS RT/L2
[Forged Alloy Brake Lever]
[Rubber Cushioned Up-Shift Lever]
[418g]



FCRS6 50-34T FCRS1 53-39T
[BCD 110mm] [BCD 130mm]
[6061 Forged Alloy Crank]
[7075 Chainrings]
[7075 Bolts & Nuts]
[826g~889g incl. BB]



CNR10 [Hollow Pins]
S[Chrome]



BBRS
[Int. BB FCRX]
[93g]



FDRS0 BB/LB/MB
[56~50T Double]
[Forged Alloy Links]
[99g]



RDRS SD
[7075 Bracket Bolt]
[Alloy Links]
[Alloy Cage]
[10 & 9-Speed]
[195g]



BCRS F/R/P
[Quick-Release]
[Forged Alloy Caliper]
[Cartridge Brake Shoe Pads]
[Convex Washer Adj. Shoes]
[184g]



STR90 R9/LL
[Forged Alloy Brake Lever]
[Rubber Cushioned Up-Shift Lever]
[418g/pair]



SLR90 R9/LF
B[28.6mm]
C[44mm]



FDR90 BB/LB/MB
[56~50T Double]
[Forged Alloy Links]



FDR97 BB/MB/SB [52T]
FDR99 BB/LB/MB [50T]
[Triple]
[Forged Alloy Links]



CSR96 9AQ 11-25T
CSR94 9BP 12-24T



CNM99 [Hollow Pins]
S[Chrome]/Y[Gray]



CNM94
S[Chrome]/Y[Gray]



FCR9F 50-34T
FCR9A 53-39T
[Alloy Chainrings]
[SCM435 Bolts & Nuts]



BBS20-BSA/BSF
[BC-68/(103mm FCR9F)/(111mm FCR9A)]



RDR90 SD/LD
[Alloy Links]



FCR96 50-34T FCR97 52-42-30T
FCR91 53-39T
[SCM435 Bolts & Nuts]



BBS15-BSA/BSF
[BC-68/(103mm FCR96)/(111mm FCR91)
/(116mm FCR97)]



BCR90 P/F/R
[Quick-Release]
[Forged Alloy Caliper]
[Cartridge Brake Shoe Pads]

SunRACE

8 x 2/3 speed

R80



STR80 R8/LL
[Forged Alloy Brake Levers]
[Rubber Cushioned Up-Shift Lever]
[418g/pair]



SLR63

Brazed on: R8/LF B[28.6mm]
C[44mm]

Clamp: 8F H[22.2mm]
G[25.4mm]
D[28.6mm]



FCR81 53-39T
83 52-42T
FCR87 52-42-30T



FCR86 50-34T



BBS15-BSA
[BC-68/(103mm FCR81/83/86
/(116mm FCR87)]



FDR80 BB/MB/SB
[56--50T Double]
[Forged Alloy Links]



CNM89 [Hollow Pins]
S[Chrome]/Y[Gray]



CNM84
S[Chrome]/Y[Gray]



CSR86 8AO 11-23T
8BQ 12-25T
CSR63 8AP 11-24T
8BP 12-24T
CSR63 7AP 11-24T
7BP 12-24T
7CQ 13-25T
S[Satin]



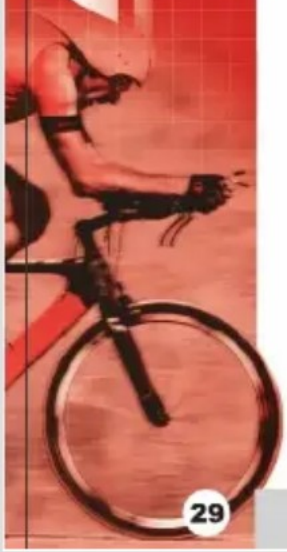
FDR87 BB/MB/SB
[52T Triple]
[Forged Alloy Links]



RDR86 SD/LD



BCR80 P/F/R
[Quick-Release]
[Forged Alloy Caliper]





BLR31 P/R/L



SLR39

Brazed on: R7/R6/R5/LF B[28.6mm] C[44mm]

Clamp: 7F/6F/5F H[22.2mm] G[25.4mm] D[28.6mm]



FCR31 53-39T
FCR33 52-42T



BBS15-BSB
[BC-68/107mm]



MFR30 7CP 13-24T
C[CP]



MFR3S 7CP 13-24T
U[UCP]



MFR2A 6DP 14-24T
5DP 14-24T
2[Brown+Black Combination]



FDR31 SB/MB
[53–52T Double]



CNM54
Y[Gray]/B[Black]



RDR31 SD
[7-Speed]



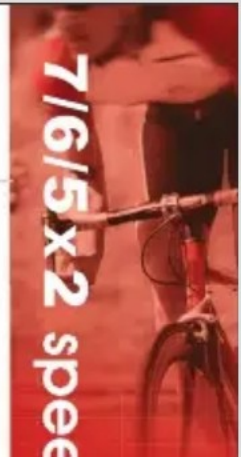
RDM2T SD/SB
[7 & 6-Speed]



RDM15 SD/SB
[5-Speed]



BCR30 P/F/R
[Forged Alloy Caliper]



7/6/5x2 speed

SUNRACE

R03 SUNRACE



BLR02 P



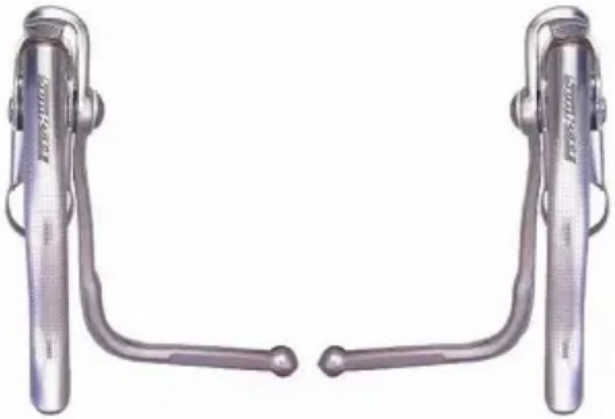
SLR03 FF/RF
Clamp:(H) 22.2mm (D)28.6mm



FDM06 SB
[Double]



CNM22
B[Black]



BLR03 P



MFR05 6DP 14-24T
5DP 14-24T



RDM10 SD/SB



Bottom Bracket Set

(ISIS)



BBI 40
[Alloy Cups & Sleeve]
[Axle Thread M12x1.0]



BBI 30
[Alloy Cups & Stopper]



BBI 20
[Alloy Cups & Sleeve]



BBI 10
[Steel Cups & Sleeve]



BBI 21
[Alloy Cups & Sleeve]



BBI 11
[Steel Cups & Sleeve]

(Square Taper)



BBS 20
BBS 22 (E-Type)
[Alloy Cups & Sleeve]



BBS 15
BBS 17 (E-Type)
[Steel Cups & Sleeve]



BBS 10
BBS 12 (E-Type)
[Steel Right Cup & Sleeve]



BBS 21
[Alloy Cups & Sleeve]



BBS 16
[Steel Cups & Sleeve]



BBS 11
[Steel Right Cup & Sleeve]



BBS 05
[Steel Cup]
[Engineering Polymers Sleeve]



Other

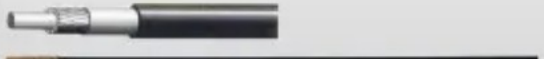
Chains

*See page 74 for specifications



CNR1Z-T
CNR1X-S
CNR10-S
CNM9Z-T
CNM9X-S
CNM99-S
CNM99-Y
CNM94-S
CNM94-Y
CNM89-S
CNM84-S/Y
CNM54-Y/B
CNM22-B
CNS22-D
CNS10-B/D
CNX42-S
CNX44-S
CNX45-S
CNX46-S

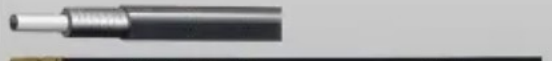
Casings



OCSSP-SP Index Type Ø5mm



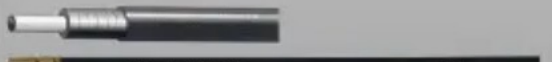
OCRSP-SP Index Type Ø4mm



OCS2S-2SP Index Type Ø5mm



OCR2S-2SP Index Type Ø4mm



OCS2P-2P Friction Type Ø5mm



OCR2P-2P Friction Type Ø4mm



OCS1P-1P Friction Type Ø5mm

Color options available

After Market

DRIVEN



BOX



BP



HP



Service Parts



Lock Ring For Cassettes
[11T & 12T Option]
[Forged Alloy]

NO.3503.0195.003 [11T]
NO.3503.0195.004 [12T]



Rear Derailleur Pulley
[11T]
[7075 Alloy/CNC]
[Sealed Cartridge Bearing]

NO.3399.0000.009



Rear Derailleur Pulley
[10T]

NO.SP-850



Rear Derailleur Bracked

NO.SP-550I-2



Guide Pin For Chain
[10/9 Speed Option]

NO.CNP10 [10 Speed]
NO.CNP09 [9 Speed]



Quick Release Link
[9/8/7 Speed Option]

NO.CNQ09 [9 Speed]
NO.CNQ87 [8/7 Speed]



Cotterless Axle Bolt
[M8x1]

NO.3404.0305.001



Cotterless Axle Bolt
[M12x1 & M15x1 Option]
[Alloy Cup]

NO.3404.0305.024 [M12x1]
NO.3404.0305.025 [M15x1]

Service Parts



Chainrings Combinations
[7075 Alloy/CNC]
53/52-39
50/34
50/36



Bolt & Nut Set for Chainrings
[7075 Alloy]

NO.3499.0000.039 [Silver]
NO.3499.0000.040 [Gold]



End Grip - TPR
[Open 80mm]
[Closed 86mm]

NO.GPM50TO [Open]
NO.GPM50TC [Closed]



Front Derailleur Clamp
[Forged Alloy]
[ø34.9,ø31.8,ø28.6mm Option]

NO.SPFDCA01LBD0 [ø34.9]
NO.SPFDCA01MBD0 [ø31.8]
NO.SPFDCA01SBD0 [ø28.6]



QRZ7R



QRZ7F

Quick Release
[Titanium Axle]
[Alloy Lever & Nut]
[112 & 149 mm Option]



QRX7R



QRX7F

Quick Release
[SCM435 Axle]
[Alloy Lever & Nut]
[112 & 149 mm Option]

M Specifications

Trigger Shifters

Model No.	DLM93		DLM90		DLM53		
	R9	L3	R9	L3	R8	R7	L3
Side and Speed	Right 9-Speed	Left 3-Speed	Right 9-Speed	Left 3-Speed	Right 8-Speed	Right 7-Speed	Left 3-Speed
Display Type	Podium Top		Podium Top		Podium Top		
Cable Adjuster	○		○		○		
Clamp Fastening Screw	SUS302 Stainless Steel		SUS302 Stainless Steel		SCM435 Chromoly		
Large Lever	Aluminum		Engineering Polymers		Aluminum		
Small Lever	Engineering Polymers		Engineering Polymers		Engineering Polymers		
Cable Type	Slick-Galvanized		Slick-Galvanized		Slick-Galvanized		
Cable Length	2000mm	1500mm	2000mm	1500mm	2000mm		1500mm
Casing Compatibity	SP		SP		SP	2SP AND ↑	2SP AND ↑
Finish	Silver / Black		Black		Black		
Average Weight	155.5g	152.5g	158g	157g	155.5g	155.5g	153.5g

Handlebar diameter 22.2 ±0.2 mm / Tighten torque 60 ~ 80 kgf-cm

Model No.	DLM33		
	R8	R7	L3
Side and Speed	Right 8-Speed	Right 7-Speed	Left 3-Speed
Display Type	Podium Top		
Cable Adjuster	○		
Clamp Fastening Screw	SCM435 Chromoly		
Large Lever	Engineering Polymers		
Small Lever	Engineering Polymers		
Cable Type	Galvanized		
Cable Length	2000mm		1500mm
Casing Compatibity	SP	2SP AND ↑	2SP AND ↑
Finish	Black		
Average Weight	158g	158g	157g

Handlebar diameter 22.2 ±0.2 mm / Tighten torque 60 ~ 80 kgf-cm



Twist Shifters

Model No.	TSM63				TSM53		
	R8	R7	L3	LF	R8	L3	LF
Side and Speed	Right 8-Speed	Right 7-Speed	Left 3-Speed	Left Friction	Right 8-Speed	Left 3-Speed	Left Friction
Cyclops Display	X				○		
Force Adjuster	○				X		
Cable Adjuster	○				○		
Clamp Type	C-Clamp				C-Clamp		
Cable Type	Slick-Galvanized				Slick-Galvanized		
Cable Length	2000mm		1500mm		2000mm	1500mm	
Casing Compatibity	SP	2SP AND ↑	2SP AND ↑	2P AND ↑	SP	2SP AND ↑	2P AND ↑
Average Weight	109g	109g	106.5g	106.5g	89g	86g	86g

Handlebar diameter 22.2 ±0.2 mm / Tighten torque 15 ~ 25 kgf-cm

Model No.	TSM4S		TSM33			
	R7	L3	R7	R6	L3	LF
Side and Speed	Right 7-Speed	Left 3-Speed	Right 7-Speed	Right 6-Speed	Left 3-Speed	Left Friction
Cyclops Display	○		○			
Cable Adjuster	○		○			
Clamp Type	C-Clamp		C-Clamp			
Cable Type	Slick-Galvanized		Slick-Galvanized			
Cable Length	2000mm	1500mm	2000mm		1500mm	
Casing Compatibity	SP	2SP AND ↑	SP	2SP AND ↑	2SP AND ↑	2P AND ↑
Average Weight	114g	112g	89g	89g	86g	86g

Handlebar diameter 22.2 ±0.2 mm / Tighten torque 15 ~ 25 kgf-cm

M Specifications

Twist Shifters

Model No.	TSM26				TSM23			
	R7	R6	R5	LF	R7	R6	R5	LF
Side and Speed	Right 7-Speed	Right 6-Speed	Right 5-Speed	Left Friction	Right 7-Speed	Right 6-Speed	Right 5-Speed	Left Friction
Cable Adjuster	○				×			
C-Clamp	×				×			
Cable Type	Galvanized				Galvanized			
Cable Length	2000mm			1500mm	2000mm			1500mm
Casing Compatibity	2SP AND ↑			2P AND ↑	2SP AND ↑			2P AND ↑
Average Weight	102g	102g	102g	98g	97g	97g	97g	94.5g

Handlebar diameter 22.2 ±0.2 mm / Tighten torque 15 ~ 17 kgf-cm

Model No.	TSM2S				
	R7	R6	R5	RF	LF
Side and Speed	Right 7-Speed	Right 6-Speed	Right 5-Speed	Right Friction(7 /6 /5)	Left Friction
Cable Adjuster	×				
C-Clamp	×				
Cable Type	Slick-Galvanized			Galvanized	
Cable Length	2000mm			1500mm	
Casing Compatibity	2SP AND ↑			2P AND ↑	2P AND ↑
Average Weight	87.5g	87.5g	87.5g	87.5g	87.5g

Handlebar diameter 22.2 ±0.2 mm / Tighten torque 15 ~ 30 kgf-cm

Thumb Shifters

Model No.	SLM2T					SLM10	
	R7	R6	R5	L3	LF	RF	LF
Side and Speed	Right 7-Speed	Right 6-Speed	Right 5-Speed	Left 3-Speed	Left Friction (3 / 2)	Right Friction (7 / 6 / 5)	Left Friction (3 / 2)
Cable Adjuster	×			○	×	×	
Cable Type	Galvanized					Galvanized	
Cable Length	2000mm			1500mm		2000mm	1500mm
Casing Compatibity	2SP AND ↑			2SP AND ↑	2P AND ↑	1P AND ↑	
Average Weight	64.5g	64.5g	64.5g	65g	65g	64.5g	61.5g

Handlebar diameter 22.2 ±0.2 mm / Tighten torque 20~ 25 kgf-cm

Front Derailleurs

Model No.	FDM97	FDM96	FDM90
Top Gear Teeth	44T		42T
Top-Low Max. Capacity	22T		20T
Top-Middle Min. Capacity	10T		10T
Cable Routing	(D) Dual Pull		(D) Dual Pull
Clamp Diameter	(L) 34.9 / (M) 31.8 / (S) 28.6mm		(L) 34.9 / (M) 31.8 / (S) 28.6mm
Clamp Material	Aluminum	Aluminum-Steel	Aluminum-Steel
Chain Stay Angle	66~69 ◦		66~69 ◦
Average Weight	144g(M)	153g(M)	150g(M)

Model No.	FDM67	FDM66	FDM56	FDM34
Top Gear Teeth	42T		42T	48T
Top-Low Max. Capacity	20T		18T	20T
Top-Middle Min. Capacity	10T		8T	10T
Cable Routing	(D) Dual Pull		(D) Dual Pull	(D) Dual Pull
Clamp Diameter	(L) 34.9 / (M) 31.8 / (S) 28.6mm		(L) 34.9 / (M) 31.8 / (S) 28.6mm	(L) 34.9 / (M) 31.8 / (S) 28.6mm
Clamp Material	Aluminum	Aluminum-Steel	Aluminum-Steel	Aluminum-Steel
Chain Stay Angle	66~69 ◦		66~69 ◦	66~69 ◦
Average Weight	141g(M)	150g(M)	159g(L)	145g(M)

Model No.	FDM2A	FDM2S	FDM2B	FDM2C	FDM06	FDM05
Top Gear Teeth	48 T	42 T	48 T	42 T	48 T	48 T
Top-Low Max. Capacity	20 T	18 T	20 T	18 T	20T	20T
Top-Middle Min. Capacity	10 T	8 T	10 T	8 T	10T	10T
Clamp Diameter	(M) 31.8 / (S) 28.6mm		(M) 31.8 / (S) 28.6mm		(S) 28.6 mm	(M) 31.8 / (S) 28.6mm
Cable Routing	(T) Top Pull / (B) Bottom Pull		(T) Top Pull / (B) Bottom Pull		(B) Bottom Pull	(B) Bottom Pull
Chain Stay Angle	66~69°		66~69°		66~69 ◦	66~69 ◦
Average Weight	154g(M)	144g(M)	154g(M)	144g(M)	142g	148g

M Specifications

Front Chainwheel

Model No.	FCMZ7	FCMX7
Compatibility	9-Speed	9-Speed
Function	Super Fluid Drive	Super Fluid Drive
Crank Arm Spline Type	Integrated External BB	Integrated External BB
Number of Teeth	44-32-22T	44-32-22T
Outer Chainring	7075 Aluminum / Anodized / CNC	7075 Aluminum / Anodized / CNC
Middle Chainring	7075 Aluminum / Anodized	7075 Aluminum / Anodized
Inner Chainring	7075 Aluminum / Anodized	7075 Aluminum / Anodized
Removable Chainrings	○	○
Crank Arms	Carbon Reinforced Forged Aluminum	6061 Aluminum Forged / Anodized
Crank Arm Length	175mm	175mm
Axle Material	Titanium	Chrome-moly
Chainring Bolts & Nuts	7075 Aluminum / Gold Anodized	7075 Aluminum / Silver Anodized
Bolt Circle Diameter	104mm / 64mm	104mm / 64mm
Bottom Bracket	Aluminum / Gold Anodized	Aluminum / Silver Anodized
Bottom Bracket Shell Width	BC-68 / 73mm	BC-68 / 73mm
Chain Line	50mm	50mm
Crank(R) Weight	617.5g (175)	579.5g (175)
Crank(L) Weight	230g (175)	200g (175)
Total Average Weight	847.5g (175)	779.5g (175)

Bottom Bracket Mountain Series

Model No.	BBMZ	BBMX	BBM97	BBM9S
Cranket	Integrated BB for FCMZ7	Integrated BB for FCMX7	Integrated BB for FCM99/98/97	Integrated BB for FCM9Q/9R/9S
Chain Line	50mm	50mm	50mm	50mm
Shell Width	68 / 73mm	68 / 73mm	68 / 73mm	68 / 73mm
Adapter	Aluminum	Aluminum	Aluminum	Aluminum
Finish	Anodized / Gold	Anodized / Silver	Anodized / Silver	Anodized / Silver
Average Weight	93g/set	93g/set	93g/set	93g/set



Front Chainwheel

Model No.	FCM99	FCM98	FCM97
Compatibility	9-Speed	9-Speed	9-Speed
Function	Super Fluid Drive	Super Fluid Drive	Super Fluid Drive
Crank Arm Spline Type	Integrated External BB	Integrated External BB	Integrated External BB
Number of Teeth	44-32-22T	44-32-22T	44-32-22T
Outer Chainring	7075 Aluminum / Anodized	7075 Aluminum / Anodized	7075 Aluminum / Anodized
Middle Chainring	7075 Aluminum / Anodized	7075 Aluminum / Anodized	SS400 / Painted
Inner Chainring	7075 Aluminum / Anodized	SS400 / Painted	SS400 / Painted
Removable Chainrings	○	○	○
Crank Arms	6061 Aluminum Forged / Anodized	6061 Aluminum Forged / Anodized	6061 Aluminum Forged / Anodized
Crank Arm Length	175mm	175mm	175mm
Axle Material	Chrome-moly	Chrome-moly	Chrome-moly
Chainring Bolts & Nuts	7075 Aluminum / Silver Anodized	7075 Aluminum / Silver Anodized	7075 Aluminum / Silver Anodized
Bolt Circle Diameter	104mm / 64mm	104mm / 64mm	104mm / 64mm
Bottom Bracket	Aluminum / Silver Anodized	Aluminum / Silver Anodized	Aluminum / Silver Anodized
Bottom Bracket Shell Width	BC-68 / 73mm	BC-68 / 73mm	BC-68 / 73mm
Chain Line	50mm	50mm	50mm
Crank(R) Weight	583.5g (175)	606.5g (175)	650g (175)
Crank(L) Weight	200g (175)	200g (175)	200g (175)
Total Average Weight	783.5g (175)	806.5g (175)	850g (175)

Front Chainwheel

Model No.	FCM9Q	FCM9R	FCM9S
Compatibility	9-Speed	9-Speed	9-Speed
Function	Super Fluid Drive	Super Fluid Drive	Super Fluid Drive
Crank Arm Spline Type	Integrated External BB	Integrated External BB	Integrated External BB
Number of Teeth	44-32-22T	44-32-22T	44-32-22T
Outer Chainring	7075 Aluminum / Anodized	7075 Aluminum / Anodized	SS400 / Painted
Middle Chainring	7075 Aluminum / Anodized	SS400 / Painted	SS400 / Painted
Inner Chainring	SS400 / Painted	SS400 / Painted	SS400 / Painted
Removable Chainrings	○	○	○
Crank Arms	6061 Aluminum Forged / Anodized	6061 Aluminum Forged / Anodized	6061 Aluminum Forged / Anodized
Crank Arm Length	175mm	175mm	175mm
Axle Material	Chrome-moly	Chrome-moly	Chrome-moly
Chainring Bolts & Nuts	SCM435 Chromoly	SCM435 Chromoly	SCM435 Chromoly
Bolt Circle Diameter	104mm / 64mm	104mm / 64mm	104mm / 64mm
Bottom Bracket	Aluminum / Silver Anodized	Aluminum / Silver Anodized	Aluminum / Silver Anodized
Bottom Bracket Shell Width	BC-68 / 73mm	BC-68 / 73mm	BC-68 / 73mm
Chain Line	50mm	50mm	50mm
Crank(R) Weight	757.5g (175)	801g (175)	959g (175)
Crank(L) Weight	252.5g (175)	252.5g (175)	252.5g (175)
Total Average Weight	1010g (175)	1053.5g (175)	1211g (175)



Front Chainwheel

Model No.		FCM9A	FCM9B	FCM94
Compatibility		9-Speed	9-Speed	9-Speed
Function		Fluid Drive Plus	Fluid Drive Plus	Fluid Drive Plus
Crank Arm Spline Type		Square Taper	Square Taper	Square Taper
Number of Teeth		44-32-22T	44-32-22T	42-32-22T
Outer Chainring		7075 Aluminum / Anodized	SS400	SS400
Middle Chainring		SS400	SS400	SS400
Inner Chainring		SS400	SS400	SS400
Chainguard Options		Ring Type	Ring Type	Ring Type
Crank Style		A-Crank	A-Crank	A-Crank
Crank Color Options		Black	Black	Black
Crank Arms		Forged Aluminum / Black Anodized	Forged Aluminum / Black Anodized	A356.2 Aluminum
Crank Arm Length		175mm	175mm	170mm
Chainring Bolts & Nuts		SCM435 Chromoly	SCM435 Chromoly	SCM435 Chromoly
Bolt Circle Diameter		104mm/64mm	104mm/64mm	104mm/64mm
Advise Bottom Bracket	Model	BBS15	BBS15	BBS15
	Shell Width	68mm(S)	68mm(S)	68mm(S)
	Chain Line	50mm	50mm	50mm
	Spindle Length	113mm(G)	113mm(G)	113mm(G)
Crank(R) Weight		555g (175)	555g (175)	555g (175)
Crank(L) Weight		210g (175)	210g (175)	210g (175)
Total Average Weight		765g (175)	765g (175)	765g (175)

Front Chainwheel

Model No.		FCM63	FCM52	FCM5A	FCM5S
Compatibility		8 / 7-Speed	8 / 7-Speed	7 / 8-Speed	7 / 8-Speed
Function		Fluid Drive Plus	Fluid Drive Plus	Fluid Drive	Fluid Drive
Number of Teeth		42-32-22T	42-34-24T	42-34-24T	42-34-24T
Outer Chainring		SS400	SS400	Steel	Steel
Middle Chainring		SS400	SS400	Steel	Steel
Inner Chainring		SS400	SS400	Steel	Steel
Chainguard Options		Ring Type	Ring Type	Ring Type	Ring Type
Crank Style		I-Crank	I-Crank	I-Crank	A-Crank
Crank Arms		A356.2 Aluminum	A356.2 Aluminum	Forged Aluminum	Steel
Crank Arm Length (mm)		175/170mm	175/170/165/162.5mm	175/170mm	152/170mm
Advise Bottom Bracket	Model	BBS15	BBS15	BBS15	BBS15
	Shell Width	68mm(S)	68mm(S)	68mm(S)	68mm(S)
	Chain Line	50mm	50mm	50mm	50mm
	Spindle Length	119mm(K)	122mm(N)	122mm(N)	127mm(U)
Crank(R) Weight		635g (175)	685g (175)	633g (175)	871.5g (175)
Crank(L) Weight		235g (175)	235g (175)	225.5g (175)	477.5g (175)
Total Average Weight		885g (175)	920g (175)	1491.5g (175)	1348.5g (175)



Front Chainwheel

Model No.		FCM33	FCM31
Compatibility		7 / 8-Speed	7 / 8-Speed
Function		Fluid Drive	Fluid Drive
Number of Teeth		48-38-28T	48-38-28T
Outer Chainring		SS400	SS400
Middle Chainring		SS400	SS400
Inner Chainring		SS400	SS400
Chainguard Options		Full or Ring Type	Full or Ring Type
Crank Style		I-Crank	A-Crank
Crank Arms		A356.2 Aluminum	A356.2 Aluminum
Crank Arm Length (mm)		175/170/165/162.5mm	175/170/165/160/152mm
Advise Bottom Bracket	Model	BBS15	BBS15
	Shell Width	68mm(S)	68mm(S)
	Chain Line	50mm	50mm
	Spindle Length	127mm(U)	127mm(U)
Crank(R) Weight		800g (175)	805g (175)
Crank(L) Weight		235g (175)	210g (175)
Total Average Weight		1035g (175)	1015g (175)

Front Chainwheel

Model No.		FCM2A	FCM2S	FCM2B	FCM2C
Function		Index	Index	Index	Index
Number of Teeth		48-38-28T	42-34-24T	48-38-28T	42-34-24T
Outer Chainring		Steel	Steel	Steel	Steel
Middle Chainring		Steel	Steel	Steel	Steel
Inner Chainring		Steel	Steel	Steel	Steel
Chainguard Options		Ring Type	Ring Type	Ring Type	Ring Type
Crank Arms		Steel+Plastics(5-Arm)	Steel+Plastics(4-Arm)	Steel+Plastics(4-Arm)	Steel+Plastics(4-Arm)
Crank Arm Length		170mm	170mm	170mm	170mm
Advise Bottom Bracket	Model No.	BBS05	BBS05	BBS05	BBS05
	Shell Width	68mm(S)	68mm(S)	68mm(S)	68mm(S)
	Chain Line	47.5mm	47.5mm	47.5mm	47.5mm
	Spindle Length	124mm(Q)	124mm(Q)	117.5mm(I)	117.5mm(I)
Crank(R) Weight		1014g(170)	817g(170)	975g(170)	820g(170)
Crank(L) Weight		467g(170)	467g(170)	400g(170)	400g(170)
Total Average Weight		1481g (170)	1284g (170)	1375g (170)	1220g (170)



Cassettes

Model No.	CSMD7 8AT (S)	CSMD7 8AS (S)
Function	Fluid Drive Plus	Fluid Drive Plus
Speeds	8-Speed	8-Speed
Number of Teeth	11-30T	11-28T
Gear Combination	11-12-14-16-18-21-24-30	11-12-14-16-18-21-24-28
Sprocket Material	SAPH440	SAPH440
Sprocket Finish	(S) Sandblast Satin	(S) Sandblast Satin
Light Weight Holes	○	○
Spacer Material	Aluminum / Gold Anodized	Aluminum / Gold Anodized
Lock Ring	Aluminum / Black Anodized	Aluminum / Black Anodized
Protecter Material	6061 Aluminum	6061 Aluminum
Proctector Finish	Anodized Gold	Anodized Gold
Chain Compatibility	6.6mm	6.6mm
Average Weight	406g	387.5g

Model No.	CSMZ7 9AV (P)	CSMZ7 9AU (P)	CSMZ7 9AV (T)	CSMZ7 9AU (T)
Function	Super Fluid Drive		Super Fluid Drive	
Speeds	9-Speed		9-Speed	
Number of Teeth	11-34T	11-32T	11-34T	11-32T
Gear Combination	11-12-14-16-18--21-24-28-34	11-12-14-16-18--21-24-28-32	11-12-14-16-18--21-24-28-34	11-12-14-16-18--21-24-28-32
Sprocket Finish	(P) Titanium-Aluminum Nitride		(T) Titanium Nitride	
Sprocket Material	SAPH440		SAPH440	
Light Weight Holes	○		○	
Spider Spacer	○		○	
Spacer Material	7075 Aluminum / Black Anodized		7075 Aluminum / Black Anodized	
Lock Ring	Aluminum / Black Anodized		Aluminum / Black Anodized	
Chain Compatibility	6.6mm		6.6mm	
Average Weight	287g	273g	287g	273g

M Specifications

Cassettes

Model No.	CSMX7 9AV (S)	CSMX7 9AU (S)	CSMX5 9AV (S)	CSMX5 9AU (S)
Function	Super Fluid Drive		Super Fluid Drive	
Speeds	9-Speed		9-Speed	
Number of Teeth	11-34T	11-32T	11-34T	11-32T
Gear Combination	11-12-14-16-18--21-24-28-34	11-12-14-16-18--21-24-28-32	11-12-14-16-18--21-24-28-34	11-12-14-16-18--21-24-28-32
Sprocket Finish	(S) Sandblast Satin		(S) Sandblast Satin	
Sprocket Material	SAPH440		SAPH440	
Light Weight Holes	○		○	
Spider Spacer	○		×	
Spacer Material	7075 Aluminum / Black Anodized		Aluminum / Silver Anodized	
Lock Ring	Aluminum / Black Anodized		Aluminum / Black Anodized	
Chain Compatibility	6.6mm		6.6mm	
Average Weight	287g	273g	361g	341g

Model No.	CSM96 9AV (S)	CSM96 9AU (S)	CSM9S 9AV (U)	CSM9S 9AU (U)
Function	Super Fluid Drive		Super Fluid Drive	
Speeds	9-Speed		9-Speed	
Number of Teeth	11-34T	11-32T	11-34T	11-32T
Gear Combination	11-12-14-16-18--21-24-28-34	11-12-14-16-18--21-24-28-32	11-12-14-16-18--21-24-28-34	11-12-14-16-18--21-24-28-32
Sprocket Finish	(S) Sandblast Satin		(U) Zinc	
Sprocket Material	SAPH440		Steel	
Light Weight Holes	○		○	
Spacer Material	Engineering Polymers		Engineering Polymers	
Chain Compatibility	6.6mm		6.6mm	
Average Weight	360g	340g	357g	337g



Cassettes

Model No.	CSM66 8AV(S)	CSM66 8AU(S)	CSM66 8AS(S)	CSM66 8BV(S)	CSM66 8BU(S)
Function	Super Fluid Drive			Super Fluid Drive	
Speeds	8-Speed			8-Speed	
Number of Teeth	11-34T	11-32T	11-28T	12-32T	12-34T
Gear Combination	11-13-15-18--21-24-28-34	11-13-15-18--21-24-28-32	11-12-14-16--18-21-24-28	12-14-16-18--21-24-28-32	12-14-16-18--21-24-28-34
Sprocket Finish	(S) Sandblast Satin			(S) Sandblast Satin	
Sprocket Material	SAPH440			SAPH440	
Light Weight Holes	○			○	
Spacer Material	Engineering Polymers			Engineering Polymers	
Chain Compatibility	7.1~7.3mm			7.1~7.3mm	
Average Weight	355g	350g	330g	340g	335g

Model No.	CSM63 7AV(S)	CSM63 7AS(S)	CSM63 7BS(S)
Function	Super Fluid Drive		
Speeds	7-Speed		
Number of Teeth	11-34T	11-28T	12-28T
Gear Combination	11-13-15-18--21-24-34	11-13-15-18--21-24-28	12-14-16-18--21-24-28
Sprocket Finish	(S) Sandblast Satin		
Sprocket Material	SAPH440		
Light Weight Holes	○		
Spacer Material	Engineering Polymers		
Chain Compatibility	7.1~7.3mm		
Average Weight	297g	245g	255g

Model No.	CSM56 8AU(U)	CSM53 8BS(C)
Function	Super Fluid Drive	Fluid Drive Plus
Speeds	8-Speed	8-Speed
Number of Teeth	11-32T	12-28T
Gear Combination	11-13-15-18--21-24-28-32	12-13-14-16--18-21-24-28
Sprocket Finish	(U) Zinc	(C)Chrome Plated
Sprocket Material	Steel	Steel
Light Weight Holes	○	○
Spacer Material	Engineering Polymers	Engineering Polymers
Chain Compatibility	7.1~7.3mm	7.1~7.3mm
Average Weight	347g	270g

M Specifications

Freewheels

Model No.	MFM90 9CU(C)	MFM90 9CU(U)	MFM60 8CV (C)	MFM60 8CV (U)	MFM60 8CU (C)	MFM60 8CU (U)	MFM56 8CV (U)
Function	Fluid Drive		Fluid Drive Plus		Fluid Drive Plus		Fluid Drive
Speeds	9-Speed		8-Speed		8-Speed		8-Speed
Lock Ring	○		○		○		○
Number of Teeth	13-32T		13-34T		13-32T		13-34T
Gear Combination	13-14-15-16-18-21-24-28-32		13-15-17-19-21-24-28-34		13-15-17-19-21-24-28-32		13-15-17-19-21-24-28-34
Sprocket Finish	(C) Chrome Plated	(U) Zinc	(C) Chrome Plated	(U) Zinc	(C) Chrome Plated	(U) Zinc	(U) Zinc + EDB
Sprocket Material	Steel		Steel		Steel		Steel
Light Weight Holes	○		○		○		×
Spacer Material	Engineering Polymers		Engineering Polymers		Engineering Polymers		Engineering Polymers
Chain Compatibility	6.6mm		7.1~7.3mm		7.1~7.3mm		7.1~7.3mm
Average Weight	533.5g		606g		578g		609g

Model No.	MFM4S 7CV (U)	MFM30 7CS (C)	MFM3S 7CS (U)	MFM20 6DS (U)
Function	Fluid Drive Plus	Fluid Drive Plus	Fluid Drive Plus	Fluid Drive Plus
Speeds	7-Speed	7-Speed	7-Speed	6-Speed
Lock Ring	○	○	○	×
Number of Teeth	13-34T	13-28T	13-28T	14-28T
Gear Combination	13-15-17-19-21-24-34	13-15-17-19-21-24-28	13-15-17-19-21-24-28	14-16-18-21-24-28
Sprocket Finish	(U) Zinc + EDB	(C) Chrome Plated	(U) Zinc	(U) Zinc
Sprocket Material	Steel	Steel	Steel	Steel
Light Weight Holes	○	○	○	○
Spacer Material	Engineering Polymers	Engineering Polymers	Engineering Polymers	Engineering Polymers
Chain Compatibility	7.3mm	7.3mm	7.3mm	7.3~7.8mm
Average Weight	504g	460g	460g	433g



Freewheels

Model No.	MFM2A 7DV (3)	MFM2A 7DV (2)	MFM2A 7DS (1)	MFM2A 7DS (2)	MFM2A 6DS (1)	MFM2A 6DS (2)	MFM2A 5DS (1)	MFM2A 5DS (2)
Function	Fluid Drive		Fluid Drive		Fluid Drive		Fluid Drive	
Speeds	7-Speed		7-Speed		6-Speed		5-Speed	
Lock Ring	○		○		○		○	
Number of Teeth	14-34T		14-28T		14-28T		14-28T	
Gear Combination	14-16-18-20-22-24-34		14-16-18-20-22-24-28		14-16-18-20-24-28		14-16-20-24-28	
Sprocket Finish	(3)Zinc+EDB	(2)Brown+EDB	(1)Zinc	(2)Brown+EDB	(1)Zinc	(2)Brown+EDB	(1)Zinc	(2)Brown+EDB
Sprocket Material	Steel		Steel		Steel		Steel	
Lock Ring Type	○		○		○		○	
Light Weight Holes	×		×		×		×	
Spacer Material	Engineering Polymers		Engineering Polymers		Engineering Polymers		Engineering Polymers	
Chain Compatibility	7.3mm		7.3mm		7.3~7.8mm		7.8mm	
Average Weight	535g		495g		458g		416g	

Model No.	MFM05 7DS	MFM05 6DS	MFM05 5DS
Function	Friction		
Speeds	7-Speed	6-Speed	5-Speed
Number of Teeth	14-28T	14-28T	14-28T
Gear Combination	14-16-18-20-22-24-28	14-16-18-20-24-28	14-16-20-24-28
Sprocket Finish	Black		
Sprocket Material	Steel		
Light Weight Holes	×		
Spacer Material	Engineering Polymers		
Chain Compatibility	7.3mm	7.3~7.8mm	7.8mm
Average Weight	480g	468g	432g

M Specifications

Rear Derailleurs

Model No.	RDMZ LD	RDMZ MD	RDMX LD	RDMX MD	RDM97 LD	RDM90 LD
Mounting Type	(D) Direct		(D) Direct		(D) Direct	(D) Direct
Speeds	9-Speed		9-Speed		9-Speed	9-Speed
Max. Sprocket	34T		34T		34T	32T
Min. Sprocket	11T		11T		11T	11T
Rear Capacity	23T		23T		23T	21T
Total Capacity	45T	33T	45T	33T	45T	41T
Outer Link	6061 Aluminum Forged / CNC		6061 Aluminum Forged / CNC		Aluminum	Aluminum
Inner Link	6061 Aluminum Forged		6061 Aluminum Forged		Steel	Steel
Bracket Body	6061 Aluminum Forged / CNC		6061 Aluminum Forged / CNC		Aluminum	Engineering Polymers
Plate Body	6061 Aluminum Forged / CNC		6061 Aluminum Forged / CNC		Aluminum	Engineering Polymers
Outer Plate Cage	Carbon		6061 Aluminum / CNC		Steel	Steel
Inner Plate Cage	6061 Aluminum / Anodized		6061 Aluminum / Anodized		Steel	Steel
Guide Pulley	11T / 7075 Aluminum / Bearing		11T / 7075 Aluminum / Bearing		11T(bushing)	11T(bushing)
Tension Pulley	11T / 7075 Aluminum / Bearing		11T / 7075 Aluminum / Bearing		11T(bushing)	13T(bushing)
Bracket Bolt	7075 Aluminum / Gold Anodized		7075 Aluminum / Black Anodized		Steel	Steel
Pin Bushing Outer Link	○		○		○	X
Pin Bushing Inner Link	○		○		X	X
Cable Adjuster	X		X		○	○
Average Weight	223g	220g	236g	234g	243.5g	343g



Rear Derailleurs

Model No.	RDM63 LD	RDM56 LD
Mounting Type	(D) Direct	(D) Direct
Speeds	8-Speed	8-Speed
Max. Sprocket	34T	34T
Min. Sprocket	11T	11T
Rear Capacity	23T	23T
Total Capacity	43T	43T
Outer Link	Magnesium Alloy	Aluminum
Inner Link	Steel	Steel
Bracket Body	Engineering Polymers	Engineering Polymers
Plate Body	Engineering Polymers	Engineering Polymers
Outer Plate Cage	6061 Aluminum	Steel
Inner Plate Cage	Steel	Steel
Guide Pulley	11T(bushing)	11T(bushing)
Tension Pulley	13T(bushing)	13T(bushing)
Pin Bushing Outer Link	○	×
Pin Bushing Inner Link	×	×
Average Weight	292 g	343g

Specifications

Rear Derailleurs

Model No.	RDM4S XD	RDM4S XB	RDM33 LD	RDM33 LB	RDM33 SD	RDM33 SB
Mounting Type	(D) Direct	(B) Bracket	(D) Direct	(B) Bracket	(D) Direct	(B) Bracket
Speeds	7-Speed		7-Speed		6-Speed	
Max. Sprocket	34T		30T		30T	
Min. Sprocket	13T		13T		13T	
Rear Capacity	21T		17T		16T	
Total Capacity	41T		37T		36T	
Guide Pulley	11T (bushing)		11T		11T	
Tension Pulley	15T (bushing)		11T		11T	
Average Weight	245g	285g	230g	270g	225g	265g

Model No.	RDM2T LD	RDM2T LB	RDM2T SD	RDM2T SB	RDM2B LD	RDM2B LB
Cage Type	(L) Long	(L) Long	(S) Short	(S) Short	(L) Long	(L) Long
Mounting Type	(D) Direct	(B) Bracket	(D) Direct	(B) Bracket	(D) Direct	(B) Bracket
Speeds	7 / 6-Speed		7 / 6-Speed		7 / 6-Speed	
Max. Sprocket	28T		28T		28T	
Min. Sprocket	13T		13T		13T	
Rear Capacity	15T		15T		15T	
Total Capacity	35T		27T		35T	
Average Weight	265g	290g	251g	276g	265g	290g



Rear Derailleurs

Model No.	RDM15 LD	RDM15 LB	RDM15 SD	RDM15 SB
Cage Type	(L) Long	(L) Long	(S) Short	(S) Short
Mounting Type	(D) Direct	(B) Bracket	(D) Direct	(B) Bracket
Speeds	5-Speed		5-Speed	
Max. Sprocket	28T		28T	
Min. Sprocket	13T		14T	
Rear Capacity	15T		14T	
Total Capacity	35T		26T	
Average Weight	265g	290g	253g	278g

Model No.	RDM10 LD	RDM10 LB
Mounting Type	(D) Direct	(B) Bracket
Speeds	Friction	
Max. Sprocket	28T	
Min. Sprocket	13T	
Rear Capacity	15T	
Total Capacity	35T	
Average Weight	265g	290g

Specifications

Hubs

Model No.	HBMD7		HBMZ7		HBMX7	
	F	R9	F	R9	F	R9
Cassette Carrier Material	---	7075 Aluminum	---	7075 Aluminum	---	7075 Aluminum
Cassette Carrier System	---	3 Pawls	---	3 Pawls	---	3 Pawls
Hub Shell Material	6061 Aluminum		6061 Aluminum		6061 Aluminum	
Bearing	Seal Cartridge(×2)	Seal Cartridge(×5)	Seal Cartridge(×2)	Seal Cartridge(×4)	Seal Cartridge(×2)	Seal Cartridge(×4)
D-Dimension	---	41mm	---	41mm	---	41mm
Axle Diameter	20mm	12mm	9mm	10mm	9mm	10mm
Over Lock Dimension	110mm	150mm	100mm	135mm	100mm	135mm
Hub Axle Material	---	SCM435	7075 Aluminum		7075 Aluminum	
Hub Axle Length	148mm	150mm	110mm	145mm	110mm	145mm
Spoke Holes	32H		32H		32H	
Pitch Circle Diameter	58mm		R38.5mm / L58mm	R48mm / L58mm	R38.5mm / L58mm	R45.5mm / L58mm
Flange Width	56.5mm	74.4mm	56mm	56.7mm	56mm	56.9mm
QR Lever Material	6061 Aluminum	6061 Aluminum	6061 Aluminum		6061 Aluminum	
QR Nut Material	6061 Aluminum	6061 Aluminum	6061 Aluminum		6061 Aluminum	
QR Axle Material	6061 Aluminum / SCM435	SCM435	Titanium		SCM435	
QR Axle Length	148mm	166mm	112mm	149mm	112mm	149mm
Finish	Gold Anodized		Gold Anodized		Black Anodized	
Average Weight	386.5g(W/QR)	694.5g(W/QR)	197.5g(W/QR)	342.5g(W/QR)	206.5g(W/QR)	354.5g(W/QR)



Hubs

Model No.	HBM96	
	F	R9
Cassette Carrier Material	---	SCM435
Cassette Carrier System	---	3 Pawls
Hub Shell Material	6061 Aluminum	
Bearing	Precision Ground Loose Ball	
D-Dimension	---	41mm
Axle Diameter	9mm	10mm
Over Lock Dimension	100mm	135mm
Hub Axle Material	7075 Aluminum	
Hub Axle Length	108mm	145mm
Spoke Holes	32H	
Pitch Circle Diameter	58mm	58mm
Flange Width	58mm	57mm
QR Lever Material	6061 Aluminum	
QR Nut Material	6061 Aluminum	
QR Axle Material	SCM435	
QR Axle Length	112mm	149mm
Finish	Black Anodized	
Average Weight	304g(W/QR)	492g(W/QR)

Model No.	HBM63		HBM53	
	F	R8	F	R8
Cassette / Freewheel	---	Cassette	---	Cassette
Double Rubber Seal	○		○	
Hub Shell Material	6061 Aluminum		6061 Aluminum	
Bearing	Precision Ground Loose Ball		Loose Ball	
D-Dimension	---	41mm	---	41mm
Axle Diameter	9mm	10mm	9mm	10mm
Over Lock Dimension	100mm	135mm	100mm	135mm
Hub Axle Material	SCM435		SCM435	
Hub Axle Length	108mm	145mm	108mm	145mm
Spoke Holes	32H / 36H		32H / 36H	
Pitch Circle Diameter	40mm	45.5mm	38.5mm	45.5mm
Flange Width	63.4mm	58mm	72mm	58mm
QR Lever Material	6061 Aluminum		6061 Aluminum	
QR Nut Material	6061 Aluminum		6061 Aluminum	
QR Axle Material	SCM435		SCM435	
QR Axle Length	112mm	149mm	112mm	149mm
Finish	Black Anodized		Option	
Average Weight	250.5g(W/QR)	457g(W/QR)	220g(W/QR)	440g(W/QR)

M Specifications

Hubs

Model No.	HBM40(H)			HBM40(A)	
	F	R7	R8	F	R7
Cassette / Freewheel	---	Freewheel		---	Freewheel
Type of Axle	Hollow			Solid	
Hub Shell Material	6061 Aluminum			6061 Aluminum	
Bearing	Loose Ball			Loose Ball	
D-Dimension	---	38mm	41mm	---	38mm
Axle Diameter	9mm	10mm		3/8"	
Over Lock Dimension	100mm	135mm		100mm	135mm
Hub Axle Material	S45C			S45C	
Hub Axle Length	108mm	145mm		108mm	145mm
Spoke Holes	36H			36H	
Pitch Circle Diameter	38mm	45.5mm		38mm	45.5mm
Flange Width	72mm	57mm		72mm	57mm
QR Lever Material	6061 Aluminum			n/a	
QR Nut Material	6061 Aluminum			n/a	
QR Axle Material	SCM435			n/a	
QR Axle Length	112mm	149mm		n/a	
Finish	Natural Alloy			Natural Alloy	
Average Weight	160g(W/QR)	215g(W/QR)	205g(W/QR)	160g	390g



ST Shifter Brake Lever

Model No.		STRZ		STRX	
		RT(10)	L2	RT(10)	L2
Speed	Rear	10-Speed	X	10-Speed	X
	Front	X	2-Speed	X	2-Speed
Max.Single-Stroke Shifts		3(rear)	1(front)	3(rear)	1(front)
Brake Lever		Carbon Reinforced Forged Aluminum		Aluminum Forged	
Shift Lever	Large Lever	7075 Aluminum Forged		7075 Aluminum Forged	
	Small Lever	Engineering Polymers		Engineering Polymers	
Cable Type		Stainless Steel		Stainless Steel	
Cable Length		2000mm	1700mm	2000mm	1700mm
Casing Compatibity		SP		SP	
Bracket		Engineering Polymers		Engineering Polymers	
Handle Bar Diameter		23.8~24.2mm		23.8~24.2mm	
Average Weight		409(Pair)		418(Pair)	

Model No.		STRS		STR90		STR80	
		RT(10)	L2	R9	LL	R8	LL
Speed	Rear	10-Speed	X	9-Speed	X	8-Speed	X
	Front	X	2-Speed	X	2/3-Speed	X	2/3-Speed
Max.Single-Stroke Shifts		3(rear)	1(front)	3(rear)	1(front)	3(rear)	1(front)
Brake Lever		Aluminum Forged		Aluminum Forged		Aluminum Forged	
Shift Lever	Large Lever	Rubber Cushioned		Rubber Cushioned		Rubber Cushioned	
	Small Lever	Engineering Polymers		Engineering Polymers		Engineering Polymers	
Cable Type		Stainless Steel		Stainless Steel		Stainless Steel	
Cable Length		2000mm	1700mm	2000mm	1700mm	2000mm	1700mm
Casing Compatibity		SP		SP		SP	
Bracket		Engineering Polymers		Engineering Polymers		Engineering Polymers	
Handle Bar Diameter		23.8~24.2mm		23.8~24.2mm		23.8~24.2mm	
Average Weight		418(Pair)		418(Pair)		418(Pair)	

R Specifications

Thumb Shifters

Model No.		SLR90		SLR63		
		R9	LF	R8	LF	8F
Speed	Rear	9-Speed	×	8-Speed	×	8-Speed
	Front	×	Friction (3 / 2)	×	Friction (3 / 2)	Friction (3 / 2)
Mounting		Brazed On Type 28.6mm (B) Brazed On Type 44mm (C)		Brazed On Type 28.6mm (B) Brazed On Type 44mm (C)		Down Tube 28.6mm Clamp (D) Handlebar Stem 25.4mm Clamp (G) 、22.2mm Clamp (H)
Cable Type		Slick-Galvanized		Slick-Galvanized		Slick-Galvanized
Cable Length		2000mm	1500mm	2000mm	1500mm	R:2000mm / L:1500mm
Average Weight		56g		56g		(D) 119g / (G) (H) 134g

Model No.		SLR39						
		R7	R6	R5	LF	7F	6F	5F
Speed	Rear	7-Speed	6-Speed	5-Speed	×	7-Speed	6-Speed	5-Speed
	Front	×			Friction (3 / 2)	Friction (3 / 2)		
Mounting		Brazed On Type 28.6mm (B) Brazed On Type 44mm (C)				Down Tube 28.6mm Clamp (D) Handlebar Stem 25.4mm Clamp (G) 、22.2mm Clamp		
Cable Type		Slick-Galvanized				Slick-Galvanized		
Cable Length		2000mm			1500mm	R:2000mm / L:1500mm		
Average Weight		56g				(D) 119g / (G) (H) 134g		

Model No.		SLR03	
		FF	RF
Speed	Rear	Friction (8 / 7 / 6)	
	Front	Friction (3 / 2)	×
Mounting		(D) Down Tube 28.6mm Clamp (H) Handlebar Stem 22.2mm Clamp	
Cable Type		Galvanized	
Cable Length		R:2000mm / L:1500mm	
Average Weight		(D) 78g / (H) 70g	(D) 45g / (H) 37g





Front Derailleurs

Model No.	FDRZ	FDRX	FDRS
Rear Speeds	10-Speed	10-Speed	10-Speed
Top Gear Teeth	56~50 T	56~50 T	56~50 T
Chain Ring	Double	Double	Double
Capacity	16T	16T	16T
Mounting	Brazed on	Brazed on	Band / Brazed on
Band Diameter	X	X	(L)34.9 / (M)31.8mm
Cable Routing	(B) Bottom Pull	(B) Bottom Pull	(B) Bottom Pull
Band & Brazed on	Aluminum Forged	Aluminum Forged	Aluminum Forged
Outer Link	Aluminum Forged	Aluminum Forged(W/CNC)	Aluminum Forged
Inner Link	Aluminum Forged	Aluminum Forged	Aluminum Forged
Chain Guide	Carbon Reinforced Steel	Steel / Chrome Plated	Steel / Chrome Plated
Applicable Chainline	43.5mm	43.5mm	43.5mm
Chain Stay Angle	61~66°	61~66°	61~66°
Average Weight	101.5g	98.5g	110.5g / 99g(B)

Model No.	FDR90	FDR97	FDR99	FDR80	FDR87
Rear Speeds	9-Speed			8-Speed	
Top Gear Teeth	56~50 T	52 T	50T	56~50 T	52 T
Chain Ring	Double	Triple		Double	Triple
Capacity	16T	22T	20T	16T	22T
Mounting	Band / Brazed on			Band / Brazed on	
Band Diameter	(L)34.9 / (M)31.8mm	(M)31.8 / (S)28.6mm	(L)34.9 / (M)31.8mm	(M)31.8 / (S)28.6mm	
Cable Routing	(B) Bottom Pull			(B) Bottom Pull	
Band & Brazed on	Aluminum Forged			Aluminum Forged	
Outer Link	Aluminum Forged			Aluminum Forged	
Inner Link	Aluminum Forged			Aluminum Forged	
Chain Guide	Steel / Chrome Plated			Steel / Chrome Plated	
Applicable Chainline	43.5mm	45mm		43.5mm	45mm
Chain Stay Angle	61~66°	63~66°		61~66°	63~66°
Average Weight	110.5g / 99g(B)	131g / 119.5g(B)	114g / 99g(B)	114g / 99g(B)	115g / 100g(B)

R Specifications

Front Derailleurs

Model No.	FDR31	FDM06
Top Gear Teeth	53 T	48T
Top-Low Max. Capacity	14 T	20T
Top-Low Min. Capacity	10 T	10T
Clamp Diameter	(M)31.8 / (S)28.6mm	(S) 28.6mm
Cable Routing	(B) Bottom Pull	(B) Bottom Pull
Chain Stay Angle	63~66°	66~69°
Average Weight	150g	142g

Front Chainwheel

Model No.	FCRZ1	FCRZ3	FCRZ6	FCRZ7	FCRX1	FCRX3	FCRX6	FCRX7
Compatibility	10-Speed				10-Speed			
Function	Super Fluid Drive				Super Fluid Drive			
Crank Arm Spline Type	Integrated External BB				Integrated External BB			
Number of Teeth	53-39T	52-39	50-34T	50-36T	53-39T	52-39T	50-34T	50-36T
Outer Chainring	7075 Aluminum / Anodized / CNC				7075 Aluminum / Anodized / CNC			
Inner Chainring	7075 Aluminum / Anodized / CNC				7075 Aluminum / Anodized / CNC			
Crank Arms	Carbon				6061 Aluminum Forged / Anodized			
Crank Arm Length	172.5mm				172.5			
Axle Material	Titanium				Chrome-moly Steel			
Chainring Bolts & Nuts	7075 Aluminum / Gold Anodized				7075 Aluminum / Silver Anodized			
Bolt Circle Diameter	130mm		110mm		130mm		110mm	
Bottom Bracket	Aluminum / Gold Anodized				Aluminum / Silver Anodized			
Bottom Bracket Shell Width	BC1.37*24T - 68mm				BC1.37*24T - 68mm			
Chain Line	43.5mm				43.5mm			
Crank(R) Weight	623.5g	621.5g	613.5g	620.5g	637g	635g	574g	581g
Crank(L) Weight	168.5g	168.5g	168.5g	168.5g	252g	252g	252g	252g
Total Average Weight	792g	790g	782g	789g	889g	887g	826g	833g



Front Chainwheel

Model No.	FCRS1	FCRS6
Compatibility	10-Speed	
Function	Super Fluid Drive	
Crank Arm Spline Type	Integrated External BB	
Number of Teeth	53-39T	50-34T
Outer Chainring	7075 Aluminum / Anodized	
Inner Chainring	7075 Aluminum / Anodized	
Crank Arms	6061 Aluminum Forged / Anodized	
Crank Arm Length	172.5mm	
Axle Material	Chrome-moly Steel	
Chainring Bolts & Nuts	7075 Aluminum / Silver Anodized	
Bolt Circle Diameter	130mm	110mm
Bottom Bracket	Aluminum / Silver Anodized	
Bottom Bracket Shell Width	BC1.37*24T - 68mm	
Chain Line	43.5mm	
Crank(R) Weight	637g	574g
Crank(L) Weight	252g	252g
Total Average Weight	889g	826g

Model No.		FCR9A	FCR9F	FCR91	FCR96	FCR97
Compatibility		9-Speed				
Function		Super Fluid Drive				
Crank Arm Spline Type		Square Taper				
Number of Teeth		53-39T	50-34T	53-39T	50-34T	52-42-30
Outer Chainring		7075 Aluminum / Anodized		Steel		
Inner Chainring		7075 Aluminum / Anodized		Steel		
Crank Arms		6061 Aluminum Forged / Anodized				
Crank Arm Length		172.5 / 170mm				
Chainring Bolts & Nuts		SCM435 Chromoly				
Bolt Circle Diameter		130mm	110mm	130mm	110mm	130 / 74mm
Advise Bottom Bracket	Model	BBS20	BBS20	BBS15	BBS15	BBS15
	Shell Width	68mm(S)	68mm(S)	68mm(S)	68mm(S)	68mm(S)
	Chain Line	43.5mm	43.5mm	43.5mm	43.5mm	45mm
	Spindle Length	111mm(F)	103mm(A)	111mm(F)	103mm(A)	116mm(H)
Crank(R) Weight		488.5g	402g	678g	631g	861g
Crank(L) Weight		210.5g	200g	210.5g	200g	229g
Total Average Weight		699g	602g	888.5g	831g	1090g

Bottom Bracket Road Series

Model No.	BBRZ	BBRX	BBRS
Cranket	Integrated BB for FCRZ	Integrated BB for FCRX	Integrated BB for FCRS
Chain Line	43.5mm	43.5mm	43.5mm
Shell Width	68mm	68mm	68mm
Adapter	Aluminum	Aluminum	Aluminum
Finish	Anodized / Gold	Anodized / Silver	Anodized / Silve
Average Weight	93g/set	93g/set	93g/set

R Specifications

Cranksets

Model No.		FCR81	FCR83	FCR86	FCR87	FCR31	FCR33
Chain Compatibility		8-Speed				7-Speed	
Function		Super Fluid Drive				Fluid Drive	
Crank Arm Spline Type		Square Taper				Square Taper	
Number of Teeth		53-39T	52-42T	50-34T	52-42-30T	53-39T	52-42T
Outer Chainring		Steel				Steel	
Inner Chainring		Steel				Steel	
Crank Arms		6061 Aluminum Forged / Anodized				6061 Aluminum Forged	
Crank Arm Length		170mm				170mm	
Chainring Bolts & Nuts		SCM435 Chromoly				SCM435 Chromoly	
Bolt Circle Diameter		130mm		110mm	130 / 74mm	130mm	
Advise Bottom Bracket	Model	BBS15	BBS15	BBS15	BBS15	BBS15	BBS15
	Shell Width	68mm(S)	68mm(S)	68mm(S)	68mm(S)	68mm(S)	68mm(S)
	Chain Line	43.5mm	43.5mm	43.5mm	45mm	43.5mm	43.5mm
	Spindle Length	107mm(B)	107mm(B)	103mm(A)	116mm(H)	107mm(B)	107mm(B)
Crank(R) Weight		696g	689g	631g	861g	677g	670g
Crank(L) Weight		210g	210g	200g	229g	224g	224g
Total Average Weight		906g	899g	831g	1090g	901g	894g



Cassettes

Model No.	CSRZ TAO	CSRZ TBO	CSRZ TBQ
Function	Fluid Drive Plus	Fluid Drive Plus	Fluid Drive Plus
Speeds	10-Speed	10-Speed	10-Speed
Number of Teeth	11-23T	12-23T	12-25T
Sprocket Finish	(M) Ceramic Coating	(M) Ceramic Coating	(M) Ceramic Coating
Gear Combination	11-12-13-14-15-16-17-19-21-23	12-13-14-15-16-17-18-19-21-23	12-13-14-15-16-17-19-21-23-25
Sprocket Material	7075 Aluminum / CNC	7075 Aluminum / CNC	7075 Aluminum / CNC
Lock Ring	Aluminum / Black Anodized	Aluminum / Black Anodized	Aluminum / Black Anodized
Light Weight Holes	N/A	N/A	N/A
Spacer Material	N/A	N/A	N/A
Chain Compatibility	5.9mm	5.9mm	5.9mm
Average Weight	105g	115g	120g

Model No.	CSR96 9AQ	CSR94 9BP
Function	Fluid Drive Plus	Fluid Drive Plus
Speeds	9-Speed	9-Speed
Number of Teeth	11-25T	12-24T
Sprocket Finish	(S) Sandblast Satin	(S) Sandblast Satin
Gear Combination	11-12-13-15-17-19-21-23-25	12-13-14-15-16-18-20-22-24
Sprocket Material	Steel	Steel
Light Weight Holes	○	○
Spacer Material	Engineering Polymers	Engineering Polymers
Chain Compatibility	6.6mm	6.6mm
Average Weight	280g	270g

R Specifications

Cassettes

Model No.	CSR86 8AO	CSR86 8BQ
Function	Fluid Drive Plus	
Speeds	8-Speed	
Number of Teeth	11-23T	12-25T
Sprocket Finish	(S) Sandblast Satin	
Gear Combination	11-12-13-15-17-19-21-23	12-13-15-17-19-21-23-25
Sprocket Material	Steel	
Light Weight Holes	○	
Spacer Material	Engineering Polymers	
Chain Compatibility	7.1~7.3mm	
Average Weight	235g	281g

Model No.	CSR63 8AP (S)	CSR63 8BP (S)	CSR63 7AP (S)	CSR63 7BP (S)	CSR63 7CQ (S)
Function	Fluid Drive Plus	Fluid Drive Plus	Fluid Drive Plus	Fluid Drive Plus	Fluid Drive Plus
Speeds	8-Speed	8-Speed	7-Speed	7-Speed	7-Speed
Number of Teeth	11-24T	12-24T	11-24T	12-24T	13-25T
Sprocket Finish	(S) Sandblast Satin	(S) Sandblast Satin	(S) Sandblast Satin	(S) Sandblast Satin	(S) Sandblast Satin
Gear Combination	11-12-13-14-16-18-21-24	12-13-14-15-16-18-21-24	11-12-14-16-18-21-24	12-13-14-16-18-21-24	13-15-17-19-21-23-25
Sprocket Material	Steel	Steel	Steel	Steel	Steel
Light Weight Holes	○	○	○	○	○
Spacer Material	Engineering Polymers	Engineering Polymers	Engineering Polymers	Engineering Polymers	Engineering Polymers
Chain Compatibility	7.1~7.3mm	7.1~7.3mm	7.3mm	7.3mm	7.3mm
Average Weight	214g	228g	190g	208g	208g



Freewheels

Model No.	MFR30 7CP	MFR3S 7CP	MFR2A 6DP	MFR2A 5DP	MFR05 6DP	MFR05 5DP
Function	Fluid Drive	Fluid Drive	Fluid Drive		Friction	
Speeds	7-Speed	7-Speed	6-Speed	5-Speed	6-Speed	5-Speed
Number of Teeth	13-24T	13-24T	14-24T	14-24T	14-24T	14-24T
Gear Combination	13-15-16-18-20-22-24	13-14-16-18-20-22-24	14-16-18-20-22-24	14-16-18-20-24	14-16-18-20-22-24	14-16-18-21-24
Sprocket Finish	(C) Chrome Plated	(U) Zinc	(2)Brown+EDB		(B)Black	
Sprocket Material	Steel	Steel	Steel		Steel	
Spacer Material	Engineering Polymers	Engineering Polymers	Engineering Polymers		Engineering Polymers	
Chain Compatibility		7.3mm	7.3~7.8mm	7.8mm	7.3~7.8mm	7.8mm
Average Weight	427g	430g	393g	355g	399g	357g

Rear Derailleurs

Model No.	RDRZ SD	RDRX SD	RDRS SD	RDR90 SD	RDR90 LD
Cage Type	(S) Short	(S) Short	(S) Short	(S) Short	(L) Long
Mounting Type	(D) Direct	(D) Direct	(D) Direct	(D) Direct	(D) Direct
Speeds	10 / 9-Speed	10 / 9-Speed	10 / 9-Speed	9-Speed	
Max. Sprocket	27T	27T	27T	27T	27T
Min. Sprocket	11T	11T	11T	11T	11T
Rear Capacity	16T	16T	16T	16T	22T
Total Capacity	29T	29T	29T	29T	37T
Outer Link	Carbon Reinforced Aluminum	Aluminum	Aluminum	Aluminum	
Inner Link	Aluminum	Aluminum	Aluminum	Aluminum	
Bracket Body	Aluminum	Aluminum	Aluminum	Aluminum	
Plate Body	Aluminum	Aluminum	Aluminum	Aluminum	
Outer Plate Cage	Carbon Reinforced Aluminum	Aluminum / CNC	Aluminum / Anodized	Steel	
Inner Plate Cage	Aluminum	Aluminum	Aluminum	Steel	
Bracket Bolt	7075 Aluminum / Gold Anodized	7075 Aluminum / Black Anodized	7075 Aluminum / Anodized	Steel	
Guide Pulley	11T / 7075 Aluminum / Sealed Bearing	11T / 7075 Aluminum / Sealed Bearing	11T	11T	
Tension Pulley	11T / 7075 Aluminum / Sealed Bearing	11T / 7075 Aluminum / Sealed Bearing	11T	11T	
Average Weight	202g	197.5g	195g	252g	273.5g

R Specifications

Rear Derailleurs

Model No.	RDR86 SD	RDR86 LD	RDR31 SD
Cage Type	(S) Short	(L) Long	(S) Short
Mounting Type	(D) Direct	(D) Direct	(D) Direct
Speeds	8-Speed		7-Speed
Max. Sprocket	28T	28T	24T
Min. Sprocket	11T	11T	11T
Rear Capacity	17T	17T	17T
Total Capacity	33T	39T	29T
Outer Link	Aluminum	Aluminum	Steel
Inner Link	Steel	Steel	Steel
Bracket Body	Aluminum	Aluminum	Aluminum
Plate Body	Aluminum	Aluminum	Engineering Polymers
Outer Plate Cage	Steel	Steel	Steel
Inner Plate Cage	Steel	Steel	Steel
Bracket Bolt	Steel	Steel	Steel
Guide Pulley	11T	11T	10T
Tension Pulley	11T	11T	10T
Average Weight	287g	308g	265g

Model No.	RDM2T SD	RDM2T SB	RDM15 SD	RDM15 SB
Cage Type	(S) Short	(S) Short	(S) Short	(S) Short
Mounting Type	(D) Direct	(B) Bracket	(D) Direct	(B) Bracket
Speeds	7 / 6-Speed		5-Speed	
Max. Sprocket	28T		28T	
Min. Sprocket	13T		14T	
Rear Capacity	15T		14T	
Total Capacity	27T		26T	
Average Weight	251g	276g	253g	278g

Model No.	RDM10 SD	RDM10 SB
Cage Type	(S) Short	(S) Short
Mounting Type	(D) Direct	(B) Bracket
Speeds	Friction	
Max. Sprocket	28T	
Min. Sprocket	14T	
Rear Capacity	14T	
Total Capacity	24T	
Average Weight	255g	280g



Brake Lever & Callper

Model No	BCRS	BCR90	BCR80	BCR30
Type	Dual-pivot device	Dual-pivot device	Dual-pivot device	Dual-pivot device
Reach	39~49mm	39~49mm	39~49mm	39~49mm
Quick Release	○	○	○	×
Arm Material	Aluminum Forged	Aluminum Forged	Aluminum Forged	Aluminum Forged
Pads	Adjustable angle cartrideg pad	Cartrideg pad	Normal pad	Normal pad
Finish	High-polish silver anodized	High-polish silver anodized	High-polish silver anodized	High-polish silver anodized
Average Weight	184g(Wheel)	184g(Wheel)	181g(Wheel)	176g(Wheel)

Model No	BLR31	BLR03	BLR02
Return spring	○	×	×
Bar Diameter	22.2-23.8mm	22.2-23.8mm	22.2-23.8mm
Lever Material	Aluminum	Aluminum	Aluminum
Bracket Materal	Super Nylon composite	Aluminum	Aluminum
Cover Materal	Rubber	×	×
Finish	Anodized	Anodized	Anodized
Average Weight	248g(Pair)	270g(Pair)	164g(Pair)

Specifications

Bottom Bracket Set [ISIS]

Model No.		BBI40		BBI30	BBI20	BBI21
Type		ISIS		ISIS	ISIS	
Material	Axle	SCM435(Hollow)		SCM435(Hollow)	SCM435(Hollow)	
	Cups	Alloy W/Nylok		Alloy W/Nylok	Alloy W/Nylok	
	Sleeve	Alloy		Engineering Polymers	Alloy(Cylindrical)	Alloy(Neck Contraction)
	Stopper	Steel		Alloy	SCM415	
Bearing		Seal Cartridge		Seal Cartridge	Seal Cartridge	
Shell Width		68(S) / 73(L)mm	105(X)mm	68(S) / 73(L)mm	68(S) / 73(L)mm	
Spindle Length		113(G) / 118(J)/128(W)mm	148(Z)mm	108(C)* / 113(G) / 118(J)mm	108(C)* / 113(G) / 118(J)mm	
Cup Thread		BC 1.37 x 24T(B)		BC 1.37 x 24T(B) / M36 x 24T(M)**	BC 1.37 x 24T(B) / M36 x 24T(M)**	
Axle Thread		M12 x P1.0		M15 x P1.0	M15 x P1.0	
Finish		Black		Black	Black	
Average Weight		366g(68/L113mm)	428g	154g(68/L113mm)	236g(68/L113mm)	236g(68/L113mm)

Model No.		BBI10	BBI11
Type		ISIS	
Material	Axle	SCM435(Hollow)	
	Cups	Steel	
	Sleeve	Steel(Cylindrical)	Steel(Neck Contraction)
	Stopper	SCM415	
Bearing		Seal Cartridge	
Shell Width		68(S) / 73(L)mm	
Spindle Length		108(C)* / 113(G) / 118(J)mm	
Cup Thread		BC 1.37 x 24T(B) / M36 x 24T(M)**	
Axle Thread		M15 x P1.0	
Finish		Black	
Average Weight		228g(68/L113mm)	228g(68/L113mm)

*Only shell width 68mm

**Italian-Cup with All RH Thread



Bottom Bracket Set [Square Taper]

Model No.		BBS20	BBS21	BBS22	BBS15	BBS16	BBS17
Type		Square		Square(E-Type***)	Square		Square(E-Type***)
Material	Axle	SCM415(Hollow)			10B21		
	Cups	Alloy			Steel		
	Sleeve	Alloy(Cylindrical)	Alloy(Neck Contraction)	Alloy(Cylindrical)	Steel(Cylindrical)	Steel(Neck Contraction)	Steel(Cylindrical)
	Stopper	Engineering Polymers			Engineering Polymers		
Bearing		Seal Cartridge			Seal Cartridge		
Shell Width		68(S) / 70(M) / 73(L)mm			68(S) / 70(M) / 73(L)mm		
Spindle Length		103(A)* / 107(B) / 111(F) / 113.5(G) / 115(5) / 116(H) / 118(J) / 119 (K)/ 122 (N)/ 127(U)mm					
Cup Thread		BC 1.37 x 24T(B) / M36 x 24T(M)**			BC 1.37 x 24T(B) / M36 x 24T(M)**		
Axle Screw		M8 x P1.0 Flange Screw			M8 x P1.0 Flange Screw		
Finish		Silver			Black		
Average Weight		252g(68/L113.5mm)	252g(68/L113.5mm)	252g(68/L113.5mm)	338g(68/L113.5mm)	338g(68/L113.5mm)	338g(68/L113.5mm)

Model No.		BBS10	BBS11	BBS12	BBS05
Type		Square		Square(E-Type***)	Square
Material	Axle	10B21			10B21
	Cups	R:Steel / L:Engineering Polymers			Steel (W/Waterproof Seal)
	Sleeve	Steel(Cylindrical)	Steel(Neck Contraction)	Steel(Cylindrical)	Engineering Polymers
	Stopper	Engineering Polymers			×
Bearing		Seal Cartridge			Ball Cage
Shell Width		68(S) / 70(M) / 73(L)mm			68(S) / 70(M)
Spindle Length		103(A)* / 107(B) / 111(F) / 113.5(G) / 115(5)/ 116(H) / 118(J) / 119 (K)/ 122 (N)/ 127(U)mm			113(G) / 114.5(4) / 116(H) / 117.5(I) / 118.5(K) / 120(L) / 121.5(M) / 122.5(O) / 124(Q) / 125.5(S) / 127(U)/ 129(W)/ 130(X)mm
Cup Thread		BC 1.37 x 24T(B) / M36 x 24T(M)**			BC 1.37 x 24T(B) / M36 x 24T(M)**
Axle Screw		M8 x P1.0 Flange Screw			M8 x P1.0 Flange Screw
Finish		Black			Black
Average Weight		324g(68/L113.5mm)	324g(68/L113.5mm)	324g(68/L113.5mm)	360g(68/L120mm)

*Only shell width 68mm.

**Italian-Cup with All RH Thread.

***E-Type bottom bracket is for use with bottom bracket mount front derailleurs.

Specifications

Chains

Model	CNR1Z(T)	CNR1X(S)	CNR10(S)
Speed	10 Speed	10 Speed	10 Speed
Pitch	1/2" x 11/128"	1/2" x 11/128"	1/2" x 11/128"
Pin Width	5.9mm	5.9mm	5.9mm
Pin Material	SCM425 / Hollow Pin	SCM425 / Hollow Pin	SCM425 / Hollow Pin
Pin Power	300 kgf	300 kgf	300 kgf
Outer Plate Material	SCM430 / Light Weight Holes	SCM430 / Light Weight Holes	SCM430
Inner Plate Material	SCM430 / Light Weight Holes	SCM430 / Light Weight Holes	SCM430
Tensile Strength	1050 kgf	1050 kgf	1050 kgf
Finish	(T)Titanium Nitride	(S)Chrome	(S)Chrome
Guide Pin	Standard	Standard	Standard

Model	CNM9Z(T)	CNM9X(S)	CNM99(S)	CNM99(Y)	CNM94(S)	CNM94(Y)
Speed	27 Speed	27 Speed	27 Speed		27 Speed	
Pitch	1/2" x 11/128"	1/2" x 11/128"	1/2" x 11/128"		1/2" x 11/128"	
Pin Width	≤6.6㎜	≤6.6㎜	≤6.6㎜		≤6.6㎜	
Pin Material	SCM420 / Hollow Pin	SCM420 / Hollow Pin	SCM420 / Hollow Pin		SCM420	
Pin Power	300 kgf	300 kgf	300 kgf		250 kgf	
Outer Plate Material	SCM430 / Light Weight Holes	SCM430 / Light Weight Holes	SCM430		SCM430	
Inner Plate Material	SCM430 / Light Weight Holes	SCM430 / Light Weight Holes	SCM430		SCM430	
Tensile Strength	1050 kgf	1050 kgf	1050 kgf		1050 kgf	
Finish	(T)Titanium Nitride	(S)Chrome	(S)Chrome	(Y)Grey	(S)Chrome	(Y)Grey
Easy Link	×	×	Option		Option	
Guide Pin	Standard	Standard	Option		Option	

Quick Release

Model	CNQ09	CNQ87
Chain Compatibility	9-Speed	8/7-Speed

Guide Pin

Model	CNP10	CNP09
Chain Compatibility	10-Speed	9-Speed



Chains

Model	CNM89(S)	CNM89(Y)	CNM84(S)	CNM84(Y)	CNM54(Y)	CNM54(B)	CNM22(B)
Speed	24 Speed		24 Speed		21/18 Speed		Friction
Pitch	1/2" x 3/32"		1/2" x 3/32"		1/2" x 3/32"		1/2" x 3/32"
Pin Width	7.1㎜		7.1㎜		7.3㎜		7.8㎜
Pin Material	SCM420 / Hollow Pin		SCM420		SAE1022		SAE1022
Pin Power	180 kgf		180 kgf		150 kgf		150 kgf
Outer Plate Material	SAE1035		SAE1035		SAE1008		SAE1008
Inner Plate Material	SCM430		SCM430		SAE1008		SAE1008
Tensile Strength	1050 kgf		1050 kgf		900 kgf		900 kgf
Finish	(S)Chrome	(Y)Grey	(S)Chrome	(Y)Grey	(Y)Grey	(B)Black	(B)Black
Easy Link	Option		Option		Option		Option
Guide Pin	Option		Option		Option		Option

Model	CNX44(S)	CNX42(S)	CNX46(S)	CNX45(S)
Speed	BMX	BMX	BMX	BMX
Pitch	1/2" x 1/8"	1/2" x 1/8"	1/2" x 1/8"	1/2" x 1/8"
Pin Width	11.6mm	9.4mm	9.45mm	9.45mm
Pin Material	SAE1022	SAE1022	SCM420	SCM420
Pin Power	250kgf	200kgf	200kgf	200kgf
Outer Plate Material	SAE1035	SAE1035	SCM430	SCM430
Inner Plate Material	SAE1035	SAE1035	SCM430	SCM430
Tensile Strength	1500kgf	1200kgf	1300kgf	1300kgf
Finish	(S)Chrome	(S)Chrome	(S)Chrome	(S)Chrome

Model	CNS22(D)	CNS10(D)	CNS10(B)
Speed	Inner Hub	Inner Hub	Inner Hub
Pitch	1/2" x 3/32"	1/2" x 1/8"	1/2" x 1/8"
Pin Width	7.8mm	8.6mm	8.6mm
Pin Material	SAE1022	SAE1022	SAE1022
Pin Power	150 kgf	150kgf	150kgf
Outer Plate Material	SAE1008	SAE1008	SAE1008
Inner Plate Material	SAE1008	SAE1008	SAE1008
Tensile Strength	900 kgf	1000kgf	1000kgf
Finish	(D)Dacromet	(D)Dacromet	(B)Black

Specifications

Outer Casing

Model No.	OCS SP	OCR SP	OCS 2S	OCR 2S	OCS 2P	OCR 2P	OCS 1P
Type	SP		2SP		2P		1P
Application	Shifter		Shifter / Brake		Shifter / Brake		Shifter / Brake
Shifter Compatibility	Index - R10/R9/R8/R7/L3/LF		Index - R7/R6/R5/L3/LF		Friction - RF/LF		Friction - RF/LF
Outer Dimension	5mm	4mm	5mm	4mm	5mm	4mm	5mm
Inner Metal Lining	Straight Steel Wire		Curled Flat Steel Coil		Curled Flat Steel Coil		Curled Flat Steel Coil
Inner Plastic Lining	○		○		○		×
Ferrule Material	Brass	Plastic	Brass	Plastic	Brass	Plastic	Brass
Ferrule Finish	Chrome	Black	Chrome	Black	Chrome	Black	Chrome
Casing Length / Color	To Order		To Order		To Order		To Order

SunRACE

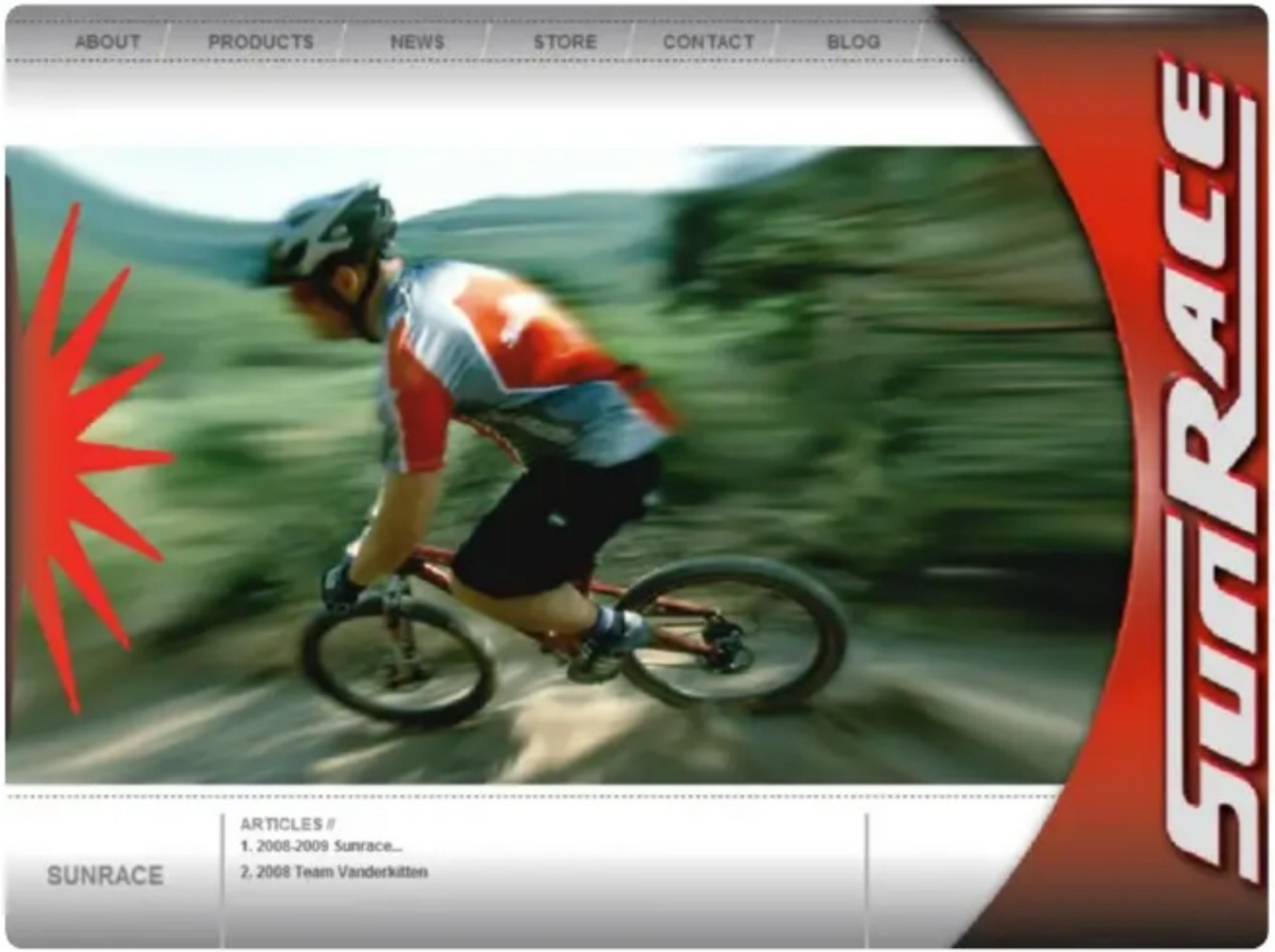
M90 Avantgarde M90 SunRACE M60 SunRACE M50 SunRACE M40 SunRACE M30 SunRACE M20 SunRACE M05 SunRACE

RS SunRACE R90 SunRACE R80 SunRACE R60 SunRACE R30 SunRACE R03 SunRACE

DRIVEN

DMZ DMX DRZ DRX

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