

NOVATEC



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WHO WE ARE

The brand Novatec is represented as the high end product of company Joy Industrial Co., LTD. Novatec was established during Year 1989 with outstanding performance and efforts in bicycle hubs and supply to well-known companies all over the world. Every product in Novatec Brand is all made in Taiwan and through out the world.

Novatec is constantly investing and researching the perfect products for the market needs and also focusing on the perfection in every detail of our products. And during 2000, 2004 and 2005, Novatec hub and carbon fiber wheel sets were awarded with SOE (the symbol of excellence honors products from Taiwan that are world-class in excellence and quality) award winning product prize.

Unlike other hub manufacturers, we do not offer an "OK" quality hub to customer, but we take care of the quality as our major target and most important job through out 365 days everyday!
And that is who we are!

HISTORY & AWARDS

History

- 1971.10** Company Yong Yu established, with 6 employees, area 50 square meters
1975 Awarded with Global export award
1976 Established Feng-Yuan factory, with area 2,183 square meters and started to produce drum brake hub
1982 Company name changed to Joy Industrial Co., LTD, and started to produce 211 steel rear hub
1986 Moved from Feng-Yuan factory and set up Ta Ya factory near by Taichung with area 4,614 square meters
1987 Awarded with outstanding performance supplier from Giant and Merida companies
1989 Novatec Brand established
1993.4 Set up Shen Zhen factory in China and Hong Kong office
1993.9 Set up Japan office for Japan market
1996.10 Awarded with ISO9002 certification and golden global export award
1997.10 Germany TUV certification was given for coaster brake products
1998.9 Set up Kun Shan factory
2001 Established Holland office for European market
2002 Awarded with ISO9002 certification
2003 TPS was introduced and guided into company
2004 Joined and became a member of A-Team organization
2005 Established Yong Yu Ironware company in China
2006 Awarded with ISO9001 certification

Awards

- 1996** Awarded with National export award
1997 JDM with Giant, awarded with National awards of excellence
1999 Novatec magnesium hub Awarded with 8th symbol of excellence (SOE) award
2001 Won the 2nd prize of TBEA (Taiwan Bicycle Export Association) mechanical caliper brake system award
2003 Carbon Fiber wheelset won the 2003 annual Innovative products competition award 2nd prize of TBEA (Taiwan Bicycle Export Association)
2003 Obtained with ISO9001 certification
2004 Novatec Carbon Wheelset X-Perti awarded with the 13th of excellence (SOE) award
2004 Joined and became a member of A-Team organization
2005 Novatec Carbon Wheelset X-Trail awarded with the 14th of excellence (SOE) award
2006 Won the prize of SBIR (Small Business Innovation Research) cycling computer system award
2006 Won the prize of TBEA cycling computer system award

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



CAUTION!

Do not clean hubs with high pressure water jet.
Do not use degreaser or other chemicals near rubber seals.

NOTICE

To unkeep long lifetime of hubs we recommend periodical maintenance.
To replace the bearings you commend to authorized service.

SYMBOLS

| | | | | | | | | | | |
|---|---|---|---|----------------|---|----------------------------|---|-------------|---|------------|
|  |  |  |  | FRONT HUB |  | 3 IN1 ROAD CASSETTE SYSTEM |  | HAND MADE |  | EASY TOOLS |
| ROAD | DOWNHILL | BMX |  | REAR HUB |  | COMPATIBLE SHIMANO 8/9S |  | EASY CHANGE |  | FAST LOCK |
|  |  |  |  | 14 GAUGE |  | COMPATIBLE CAMPAGNOLO 10S | | | | |
| CENTER LOCK | 6 BOLT DISC | MTB |  | 16 SPOKE HOLES |  | COMPATIBLE SHIMANO 10S | | | | |
| | | |  | SEAL BEARINGS | | | | | | |
| | | |  | SEAL BEARINGS | | | | | | |

1/ Smoothness can be Adjusted by Tighten or Loosen Side Caps.
 2/ Replaceable Industrial Sealed Bearings.



Zoltan Tarjan www.tarjanzoltan.com
 Things I like : Reading, Traveling
 High : 186 cm
 Weigh : 71 kg
 Traveling Type : Supersprinter
 Started with cycling : 1996

Compatibilty of Cassette Bodies

A

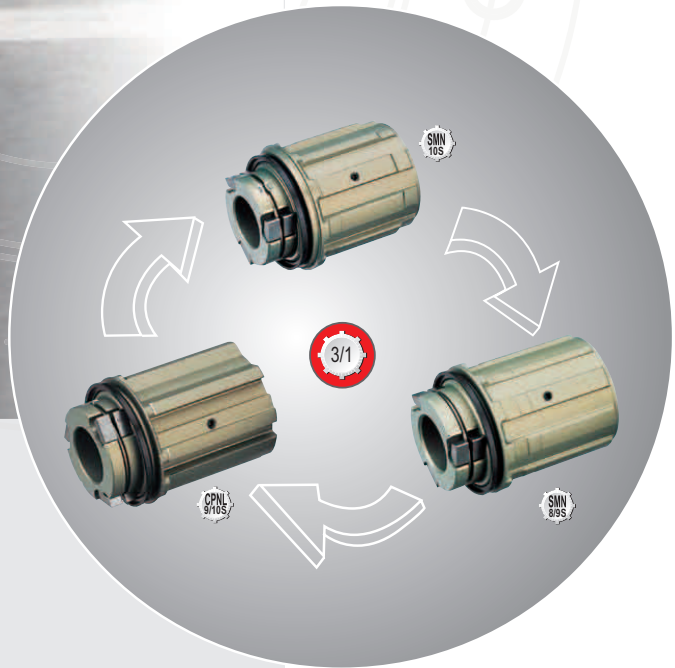
A/ Standar Cassette Body with 2 Sealed Bearings

C

Needle Bearing

B/ Special Design with 2 Sealed Bearings and 1 Needle Bearing

Alloy Cassettes For Road



Steel Cassettes For Road

4 Sealed Bearings
*F472SBT

2 Sealed Bearings
*F192SB

The 3 in 1 Road (4 Sealed Bearings) Cassette System
 *Side Caps or Washers Needed



Carbon Road Hubs

Aero Spoke Hole Available

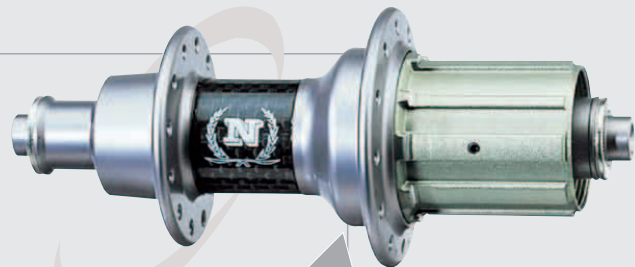
Carbon Fiber with Alloy Combination

Bearing Smoothness can be Adjusted by Tighten or Loosen Side Caps



FH A291CB

| | | | |
|-------------|-------------|------------------|----------|
| Weight | 85g | Flange To Flange | 68.7mm |
| Spoke Holes | 16 20 24 28 | Sealed Bearings | |
| Gauge | 14 15 | O.L.D. | 100mm |
| P.C.D. | 30mm | Axle | Ø9x108mm |
| | | Axle Material | AL |



| RH | F292CB | F292CB-S10 | F392CB |
|------------------|----------|-----------------|-----------|
| Weight | 296g | Sealed Bearings | 14+1NB |
| Spoke Holes | 20 24 28 | O.L.D. | 130mm |
| Gauge | 14 15 | Axle | Ø10x140mm |
| P.C.D. | 41/49mm | Axle Material | CRMO |
| Flange To Flange | 50mm | Pawls | 3 |

Option: 269g with Titanium Axle

* 1NB= 1xNeedle Bearing in Cassette Body



Carbon Road Hubs - Straight Pull

Superb Carbon Fiber Straight Pull Hub

Aero Spoke Hole Available

Bearing Smoothness can be Adjusted by Tighten or Loosen Side Caps



FH AS01SB

| | | | |
|-------------|-------|-----------------|----------|
| Weight | 87g | O.L.D. | 100mm |
| Spoke Holes | 20 24 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| | | Axle Material | AL |



| RH | FS12SB | FS12SB-S10 | FS22SB |
|-------------|----------|-----------------|-----------|
| Weight | 245g | Sealed Bearings | 14+1NB |
| Spoke Holes | 20 24 28 | O.L.D. | 130mm |
| Gauge | 14 | Axle | Ø10x140mm |
| Pawls | 3 | Axle Material | AL |



Carbon Road Hubs - Straight Pull

Specially Machined & Patented Spoke Holes
Excellent Outlooking
High / Low Flange Carbon Hub



FH A281SB-CB

| | | | |
|-------------|-----|-----------------|----------|
| Weight | 94g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 100mm |
| Gauge | | Axle | Ø9x108mm |
| | | Axle Material | AL |



Washers

RH F282SB-CB F282SB-CB-S10 F382SB-CB

| | | | |
|-------------|------|-----------------|-----------|
| Weight | 272g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 130mm |
| Gauge | | Axle | Ø10x140mm |
| Pawls | 3 | Axle Material | AL |



Alloy Road Hubs - Straight Pull

Specially Machined & Patented Spoke Holes
Excellent Outlooking
High / Low Flange Alloy Hub



FH A281SB-AL

| | | | |
|-------------|------|-----------------|----------|
| Weight | 116g | O.L.D. | 100mm |
| Spoke Holes | | Sealed Bearings | |
| Gauge | | Axle | Ø9x108mm |
| | | Axle Material | AL |



Washers

RH F282SB-AL F282SB-AL-S10 F382SB-AL

| | | | |
|-------------|------|-----------------|-----------|
| Weight | 273g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 130mm |
| Gauge | | Axle | Ø10x140mm |
| Pawls | 3 | Axle Material | AL |



Alloy Road Hubs - Straight Pull

Alloy Straight Pull Hub
Specially Drilled Spoke Holes
Slim Design



Alloy Road Hubs - Straight Pull

Specially Machined Flange
Easy Wheelset Assembly



P8 . P9



FH AS31SB

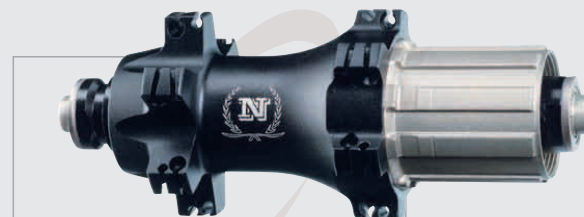
| | | | |
|-------------|----------|-----------------|-----------|
| Weight | 128g | Sealed Bearings | |
| Spoke Holes | 20 24 28 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø 9x108mm |
| | | Axle Material | AL |



Right Side Cap

FH AS81SB

| | | | |
|-------------|-------|-----------------|-----------|
| Weight | 171g | O.L.D. | 100mm |
| Spoke Holes | 20 24 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø 9x108mm |
| | | Axle Material | AL |



Left + Right Side Cap

RH FS32SB FS32SB-S10 FS42SB CPNL 9105

| | | | |
|-------------|----------|-----------------|-----------|
| Weight | 266g | Sealed Bearings | |
| Spoke Holes | 20 24 28 | O.L.D. | 130mm |
| Gauge | 14 | Axle | Ø10x141mm |
| Pawls | 3 | Axle Material | AL |

RH FS82SB FS82SB-S10 FS92SB CPNL 9105

| | | | |
|-------------|-------|-----------------|-----------|
| Weight | 291g | Sealed Bearings | |
| Spoke Holes | 20 24 | O.L.D. | 130mm |
| Gauge | 14 | Axle | Ø10x140mm |
| Pawls | 3 | Axle Material | AL |



Alloy Road Hubs

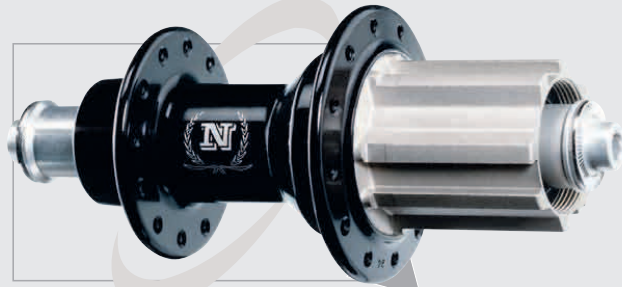
Ultra Light Weight Alloy Road Hub
Aero Spoke Holes Available
Thin Body Shape



Extra Light Only **82g**

FH A291SB

| | | | |
|-------------|----------|------------------|----------|
| Weight | 82g | Sealed Bearings | |
| Spoke Holes | 20 24 28 | O.L.D. | 100mm |
| Gauge | 14 15 | Axle | Ø9x108mm |
| P.C.D. | 30mm | Axle Material | AL |
| | | Flange To Flange | 68.7mm |



Right Side Cap

RH F292SB F292SB-S10 F392SB

| | | | |
|-------------|----------|------------------|-----------|
| Weight | 295g | Sealed Bearings | +1NB |
| Spoke Holes | 20 24 28 | O.L.D. | 130mm |
| Gauge | 14 15 | Axle | Ø10x140mm |
| P.C.D. | 41/49mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 50mm |

Option: 269g with Titanium Axle



Alloy Road Hubs

FH A271SB

| | | | |
|-------------|-------|------------------|----------|
| Weight | 112g | O.L.D. | 100mm |
| Spoke Holes | 20 24 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 38mm | Axle Material | AL |
| | | Flange To Flange | 72mm |



Left + Right Side Cap

RH F372SB F372SB-S10 F472SB

| | | | |
|-------------|-------|------------------|-----------|
| Weight | 276g | Sealed Bearings | |
| Spoke Holes | 20 24 | O.L.D. | 130mm |
| Gauge | 14 | Axle | Ø10x140mm |
| P.C.D. | 49mm | Axle Material | AL |
| Pawls | 3 | Flange To Flange | 50mm |

FH A141SB

| | | | |
|-------------|----------|------------------|----------|
| Weight | 120g | O.L.D. | 100mm |
| Spoke Holes | 24 28 32 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 38mm | Axle Material | AL |
| | | Flange To Flange | 72mm |



Right Side Cap

RH F162SB F162SB-S10 F262SB

| | | | |
|-------------|-------|------------------|-----------|
| Weight | 294g | Sealed Bearings | |
| Spoke Holes | 20 24 | O.L.D. | 130mm |
| Gauge | 14 | Axle | Ø10x140mm |
| P.C.D. | 49mm | Axle Material | AL |
| Pawls | 3 | Flange To Flange | 57mm |



Alloy Road Hubs

Classical Hub Design
Smooth Outlooking
Aero Spoke Hole Available

FH A171SB

| | | | |
|-------------|----------|------------------|----------|
| Weight | 116g | O.L.D. | 100mm |
| Spoke Holes | 24 28 32 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 38mm | Axle Material | AL |
| | | Flange To Flange | 72mm |



Left + Right Side Cap

RH F192SB

| | | | |
|-------------|----------|------------------|-----------|
| Weight | 377g | O.L.D. | 130mm |
| Spoke Holes | 24 28 32 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø10x140mm |
| P.C.D. | 45mm | Axle Material | CRMO |
| Pawls | 2 | Flange To Flange | 50mm |



RH F472SBT

| | | | |
|-------------|----------|------------------|-----------|
| Weight | 391g | Sealed Bearings | |
| Spoke Holes | 24 28 32 | O.L.D. | 130mm |
| Gauge | 14 | Axle | Ø10x140mm |
| P.C.D. | 49mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 50mm |



Alloy Road Hubs - Disc

Fashion and Light Weight Design



FH D351SB

| | | | |
|-------------|-------|------------------|----------|
| Weight | 189g | O.L.D. | 100mm |
| Spoke Holes | 32 36 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 58mm | Axle Material | AL |
| | | Flange To Flange | 62mm |



Right Side Cap

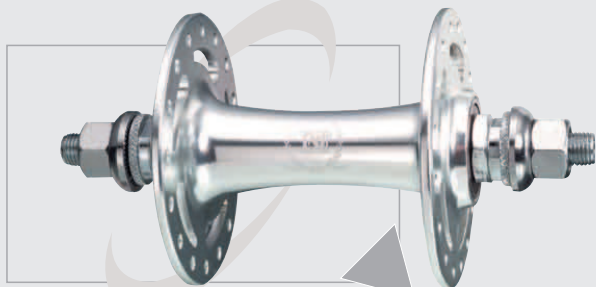
RH D352SB

| | | | |
|-------------|-------|------------------|-----------|
| Weight | 305g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 130mm |
| Gauge | 14 | Axle | Ø10x140mm |
| P.C.D. | 58mm | Axle Material | AL |
| Pawls | 3 | Flange To Flange | 52.1mm |



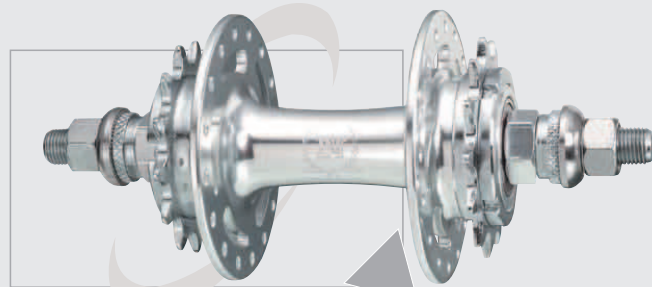
Alloy Track Hubs

Classical Track Hub Design With Superb Rotation
Large Flange Design



FH A165SBT

| | | | |
|-------------|------|------------------|----------|
| Weight | 186g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 100mm |
| Gauge | | Axle | Ø9x140mm |
| P.C.D. | 62mm | Axle Material | AL |
| | | Flange To Flange | 70mm |



RH A166SBT

| | | | |
|-------------|------|------------------|-----------|
| Weight | 235g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 120mm |
| Gauge | | Axle | Ø10x165mm |
| P.C.D. | 62mm | Axle Material | AL |
| | | Flange To Flange | 59mm |

Sprockets



| Thickness | 13T | 14T | 15T | 16T | 17T | 18T |
|---------------|--------|--------|--------|--------|--------|--------|
| 2.3mm/ 3 /32" | 500090 | 500059 | 500058 | 500072 | 506027 | 506026 |



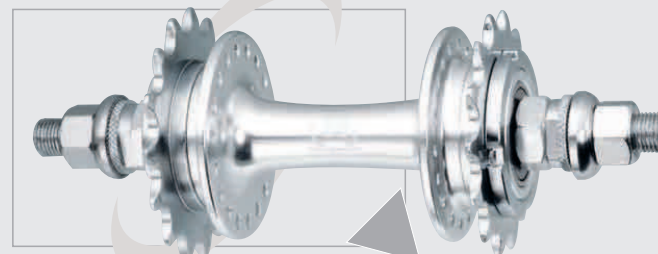
Alloy Track Hubs

Classical Track Hub Design With Superb Rotation
Small Flange Design



FH A265SBT

| | | | |
|-------------|------|------------------|----------|
| Weight | 157g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 100mm |
| Gauge | | Axle | Ø9x140mm |
| P.C.D. | 38mm | Axle Material | AL |
| | | Flange To Flange | 68mm |



RH A266SBT

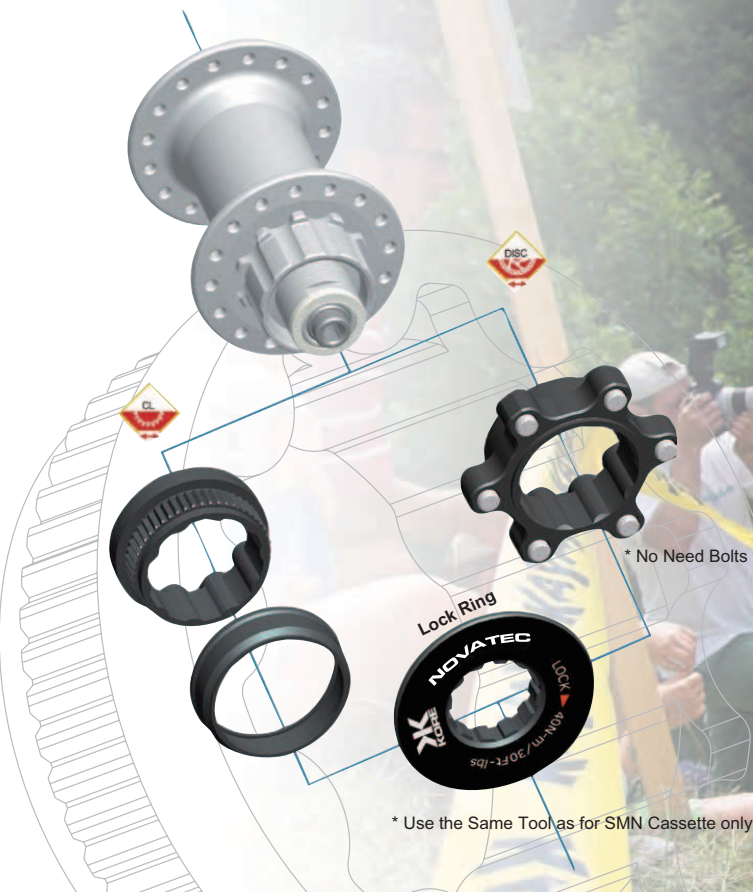
| | | | |
|-------------|--------|------------------|-----------|
| Weight | 217g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 120mm |
| Gauge | | Axle | Ø10x165mm |
| P.C.D. | 43.5mm | Axle Material | AL |
| | | Flange To Flange | 60mm |

Sprockets

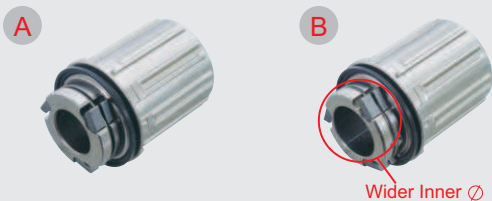


| Thickness | 13T | 14T | 15T | 16T | 17T | 18T |
|--------------|--------|--------|--------|--------|-----|--------|
| 2.8mm/ 1 /8" | 500054 | 500060 | 500053 | 500052 | - | 506025 |

The Compatible Center Lock System & Exchangable With International 6 Bolts Disc System



Compatibility of Cassette Bodies



Inner diameter of cassette body is refer to the use of axle \varnothing .



JANKA STEVKOVA

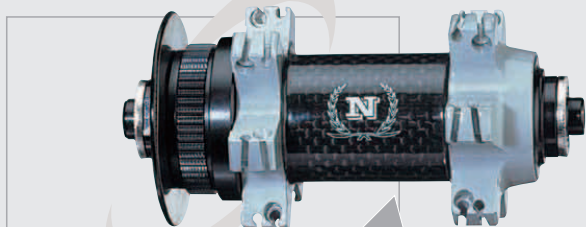
Slovak National Champion
Member of Slovak National XC Team
She Attended Olympic Games 2004 in Athens

Photo taken by Peter Mihalovic



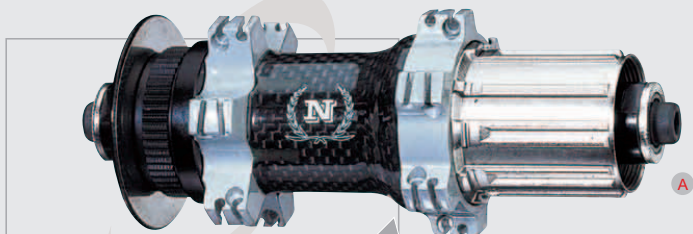
Carbon MTB Hubs - Disc - Straight Pull

Compatible To Shimano Center Lock System
Exchangeable To International 6 Bolts Disc System
Specially Machined Flange For Straight Pull
Available Cassettes Aluminium / Light Steel



FH DS51SB-CL

| | | | |
|-------------|-------|-----------------|----------|
| Weight | 207g | O.L.D. | 100mm |
| Spoke Holes | 24 28 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| | | Axle Material | AL |



RH DS52SB-CL

| | | | |
|--------|--------------------|-----------------|-----------|
| Weight | Light Steel / 472g | Gauge | 14 |
| | Aluminium / 395g | Sealed Bearings | |
| O.L.D. | 135mm | Spoke Holes | 24 28 |
| Pawls | 3 | Axle | Ø10x145mm |
| | | Axle Material | CRMO |

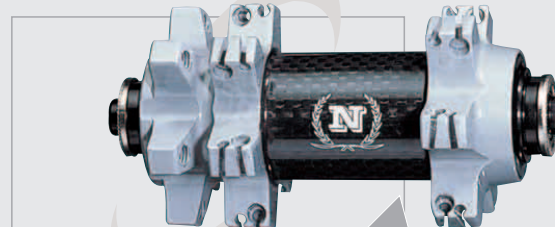


Carbon MTB Hubs - Disc - Straight Pull

Specially Machined Flange For Straight Pull
Available Cassettes Aluminium / Light Steel
For High Comfort Tighten Bearings by Side Caps
For High Comfort Adjust Tightening Strength of Bearings by Side Caps



P18 . P19



FH DS51SB

| | | | |
|-------------|------|-----------------|----------|
| Weight | 190g | O.L.D. | 100mm |
| Spoke Holes | 24 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| | | Axle Material | AL |



AL Cassette *

RH DS52SB

AL Axle and AL Cass.Body / 299g

| | | | |
|--------|--------------------|-----------------|-----------|
| Weight | Light Steel / 445g | Gauge | 14 |
| | Aluminium / 369g | Sealed Bearings | |
| O.L.D. | 135mm | Spoke Holes | 24 |
| Pawls | 3 | Axle | Ø10x145mm |
| | | Axle Material | CRMO |

*NOTE : Alloy Axle and Cassette Body Have Lighter Weight but Lower Durability Than Steel !

*NOTE: Alloy Axle and Cassette Body Have Lighter Weight but Lower Durability Than Steel !

We recommend for short time using only.

MTB & XC



Alloy MTB Hubs - Disc - Straight Pull

Compatible To Shimano Center Lock System
Exchangeable To International 6 Bolts Disc System
Specially Machined Flange
Available Cassettes Aluminium / Light Steel



FH DS11SB-CL

| | | | |
|-------------|-------|-----------------|-----------|
| Weight | 213g | O.L.D. | 100mm |
| Spoke Holes | 24 28 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø 9x108mm |
| | | Axle Material | AL |



RH DS12SB-CL

| | | | |
|--------|--------------------|-----------------|-------|
| Weight | Light Steel / 475g | Gauge | 14 |
| | Aluminium / 398g | Sealed Bearings | |
| O.L.D. | 135mm | Spoke Holes | 24 28 |
| Axle | Ø10x145mm | Axle Material | CRMO |
| Pawls | 3 | | |

*NOTE : Alloy Cassette Body has Lighter Weight but Shorter Durability than Titanium or Steel !



Alloy MTB Hubs - Disc - Straight Pull

Specially Machined Flange For Straight Pull
Available Cassettes Aluminium / Light Steel
For High Comfort Adjust Strenth of Bearings by Side Caps



P20 : P21



FH DS11SB

| | | | |
|-------------|------|-----------------|----------|
| Weight | 191g | O.L.D. | 100mm |
| Spoke Holes | 24 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| | | Axle Material | AL |



RH DS12SB

| | | | |
|--------|--------------------|-----------------|------|
| Weight | Light Steel / 448g | Gauge | 14 |
| | Aluminium / 371g | Sealed Bearings | |
| O.L.D. | 135mm | Spoke Holes | 24 |
| Axle | Ø10x145mm | Axle Material | CRMO |
| Pawls | 3 | | |

*NOTE : Alloy Cassette Body has Lighter Weight but Shorter Durability than Titanium Steel !

MTB & XC



Alloy MTB Hubs - Non Disc


Classical Hub Design

Aero Spoke Hole Available

Aluminium Cassette Body Available With 60g Less




FH A021SB

| | | | |
|-------------|-------------|------------------|---|
| Weight | 140g | Sealed Bearings |  |
| Spoke Holes | 24 28 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | 9x108mm |
| P.C.D. | 38mm | Axle Material | AL |
| | | Flange To Flange | 72mm |



RH F062SB

| | | | |
|-------------|-------------|------------------|---|
| Weight | 436g | Sealed Bearings |  |
| Spoke Holes | 24 28 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | 10x145mm |
| P.C.D. | 49mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 57mm |

Outsitzer-Novatec Team

Found in year 2006
Team Manager : Tomas Legnavsky
Background : Coach of Slovak
National XC Team

*NOTE : Alloy Cassette Body has Lower Durability than Light Steel Cassette!

MTB CROSS



Alloy MTB Hubs - Non Disc

Classical Hub Design
Aero Spoke Hole Available



FH 751SB

| | | | |
|-------------|-------------|------------------|----------|
| Weight | 141g | Sealed Bearings | |
| Spoke Holes | 24 28 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 38mm | Axle Material | AL |
| | | Flange To Flange | 72mm |



RH 802SB

| | | | |
|-------------|-------------|------------------|-----------|
| Weight | 405g | Sealed Bearings | |
| Spoke Holes | 24 28 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 45mm | Axle Material | CRMO |
| Pawls | 2 | Flange To Flange | 57mm |



Alloy MTB Hubs - Non Disc

Classical Hub Design
Aero Spoke Hole Available

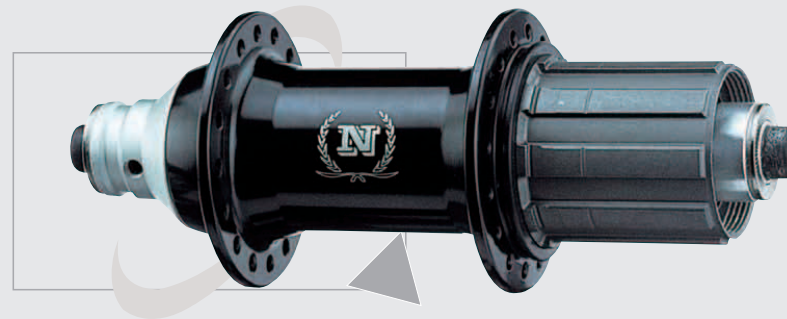


P24 . P25



FH 761SB

| | | | |
|-------------|-------------|------------------|----------|
| Weight | 140g | Sealed Bearings | |
| Spoke Holes | 24 28 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 38mm | Axle Material | AL |
| | | Flange To Flange | 72mm |



RH 818SB

| | | | |
|-------------|-------------|------------------|-----------|
| Weight | 405g | Sealed Bearings | |
| Spoke Holes | 24 28 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 45mm | Axle Material | CRMO |
| Pawls | 2 | Flange To Flange | 57mm |



Filip Polc

www.filippolc.sk

Things I like : Traveling, Snowscoot
 High : 178 cm
 Weigh : 68 kg
 Rider Type : DownHill / 4X
 Started with competition : From 4 years old



Alloy MTB Hubs - Disc

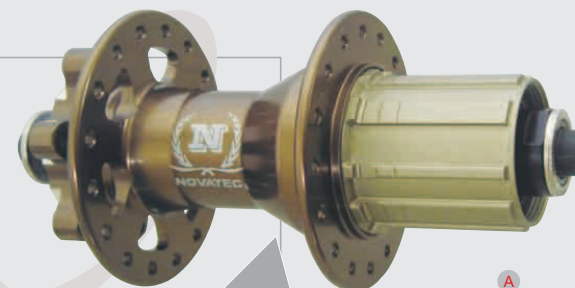
New Light Weight Design MTB/XC Hubs
 Fashion Outlooking
 Rear Hub With Light Weight Version Available



FH D811SB

| | | | |
|-------------|----------|------------------|----------|
| Weight | 191g | O.L.D. | 100mm |
| Spoke Holes | 28 32 36 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 58/45mm | Axle Material | AL |
| | | Flange To Flange | 60.4mm |

* Reference Pantone Colour : 8622C



RH D812SB-QR

AL Axle and AL Cass.Body / 298g

| | | | |
|-------------------------|--|------------------|------------------------------------|
| Weight (w/Cass Body) | Light Steel / 446g Aluminium / 368g | O.L.D. | 135mm |
| Spoke Holes | 28 32 36 | Sealed Bearings | |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 58/54mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |
| | | | D812SB-HL For Light Steel Cassette |

* Reference Pantone Colour : 8622C

*NOTE: Alloy Axle and Cassette Body has Lower Durability as Light Steel !

We recommend for short time using only.

MTB & XC





Alloy MTB Hubs - Disc

Compatible To Shimano Center Lock System
Exchangeable To International 6 Bolts Disc Rotor
Center Lock Diameter = 51.3mm



FH D041SB-CL

| | | | |
|------------------|--------|-----------------|----------|
| Weight | 197g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 45mm | Axle Material | AL |
| Flange To Flange | 60.6mm | | |



RH D042SB-CL

| | | | |
|------------------|--------|-----------------|-----------|
| Weight | 473g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 38mm | Axle Material | CRMO |
| Flange To Flange | 56.9mm | Pawls | 3 |



RH D142SB-CL

| | | | |
|------------------|--------|-----------------|-----------|
| Weight | 428g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 45mm | Axle Material | CRMO |
| Flange To Flange | 56.9mm | Pawls | 2 |

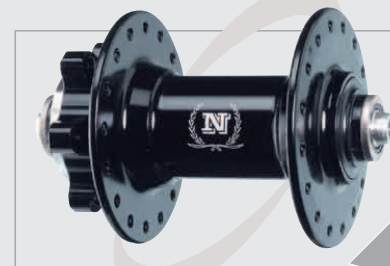


Alloy MTB Hubs - Disc

Compatible To International 6 Bolts Disc Rotor
Classical MTB CX Disc Hub
Aluminium Cassette Body Available



P28 . P29



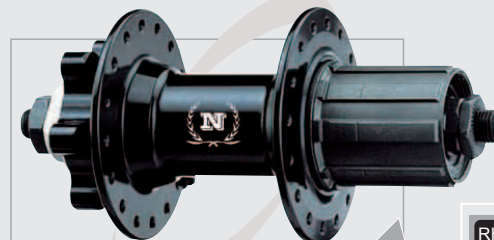
FH D041SB

| | | | |
|------------------|-------|-----------------|----------|
| Weight | 213g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 58mm | Axle Material | AL |
| Flange To Flange | 62mm | | |



RH D042SB

| | | | |
|------------------|--------|-----------------|-----------|
| Weight | 491g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Flange To Flange | 58.4mm | Pawls | 3 |



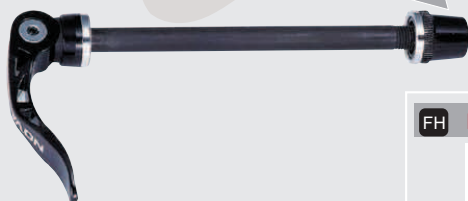
RH D142SBT

| | | | |
|------------------|-------|-----------------|-----------|
| Weight | 460g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Flange To Flange | 59mm | Pawls | 2 |



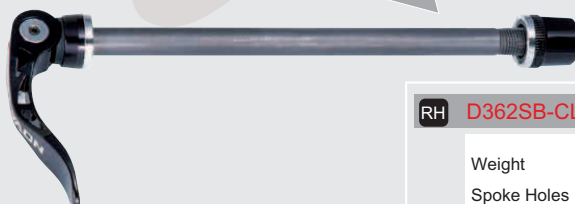
Alloy All Mountain Hubs - Disc

Compatible To Shimano Center Lock System
Exchangeable To International 6 Bolts Disc Rotor
Center Lock Diameter is 51.3mm
Thru Hollow QR & Nutted Type Available



FH D361SB-CL

| | | | |
|------------------|------|-----------------|-------|
| Weight | 226g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 100mm |
| Gauge | | Axle | Ø 9mm |
| P.C.D. | 45mm | Axle Material | AL |
| Flange To Flange | 61mm | | |



RH D362SB-CL

| | | | |
|------------------|--------|-----------------|--------|
| Weight | 464g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 135mm |
| Gauge | | Axle | Ø 10mm |
| P.C.D. | 49mm | Axle Material | CRMO |
| Flange To Flange | 56.9mm | Pawls | 3 |

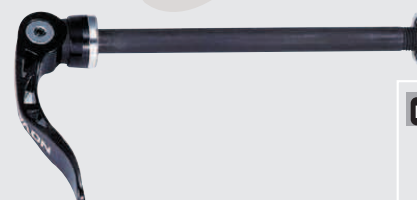
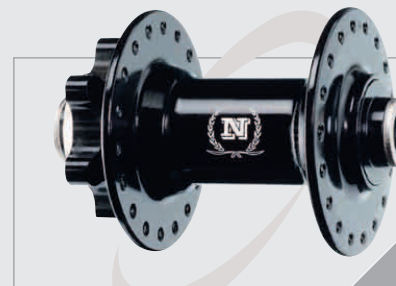


Alloy All Mountain Hubs - Disc

Compatible To International 6 Bolts Disc Rotor
All Mountain Disc Hub
Thru Hollow QR & Nutted Type Available



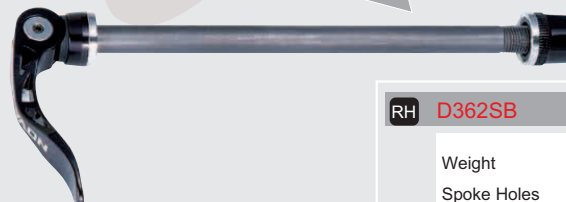
P30 . P31



* Hollow Axle

FH D361SB

| | | | |
|------------------|------|-----------------|-------|
| Weight | 235g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 100mm |
| Gauge | | Axle | Ø 9mm |
| P.C.D. | 58mm | Axle Material | AL |
| Flange To Flange | 62mm | | |



RH D362SB

| | | | |
|------------------|--------|-----------------|--------|
| Weight | 463g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 135mm |
| Gauge | | Axle | Ø 10mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Flange To Flange | 58.4mm | Pawls | 3 |



GRAVITY GROUP

GRAVITY GROUP Team was
 Founded in Austria in 2006
 Professional DH/4X Team
 6th in DH UCI Ranking 2006
 4th in 4X UCI Ranking 2006



Alloy Downhill / Freeride Hubs - Disc

Light and Fashion Design
 Alloy Cassette Body Available
 Down Hill Disc Rear Hub with O.L.D. 135mm

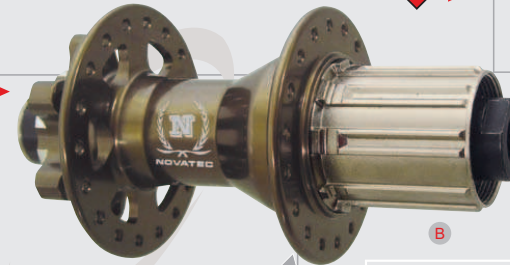


P32 . P33

FH DH61SB-HL

| | | | |
|-------------|---------|------------------|---|
| Weight | 185g | Sealed Bearings |  |
| Spoke Holes | 32 36 | O.L.D. | 110mm |
| Gauge | 14 | Axle | Ø 20mm |
| P.C.D. | 58/45mm | Flange To Flange | 60.4mm |

* Reference Colour : 8622C

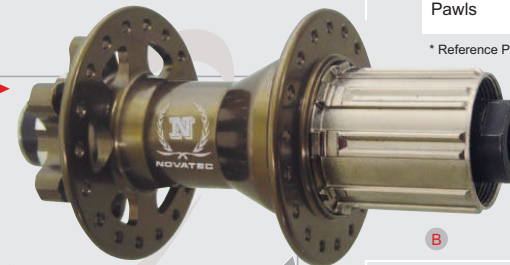


B

RH D812SB-10


| | | | |
|-------------|---------|------------------|---|
| Weight | 436g | Sealed Bearings |  |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø 10mm |
| P.C.D. | 54/58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |

* Reference Pantone Colour : 8622C



B

RH D812SB-12

| | | | |
|-------------|---------|------------------|---|
| Weight | 400g | Sealed Bearings |  |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø 12mm |
| P.C.D. | 54/58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |

* Reference Pantone Colour : 8622C

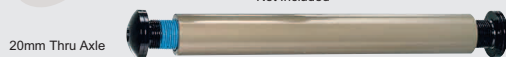


Alloy DH / Free Ride Hubs - Disc

Compatible To Shimano Center Lock System
Down Hill Disc Hub
Center Lock Dimension 56mm



Not Included



FH DH41SB-CL

| | | | |
|-------------|-------|------------------|--------|
| Weight | 288g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 110mm |
| Gauge | 14 | Axle | Ø20mm |
| P.C.D. | 58mm | Flange To Flange | 60.4mm |



RH DH12SB-CL

| | | | |
|-------------|-------|------------------|---------|
| Weight | 494g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 150mm |
| Gauge | 14 | Axle | Ø12mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 74.45mm |

| Specification | Axle Material |
|---------------|---------------|
| M12 x (202) | SCM415 |



Not Included

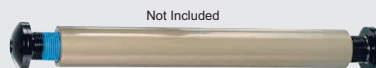


Alloy DH / Free Ride Hubs - Disc

Compatible To International 6 Bolts Disc Rotor
Down Hill Disc Hub
O.L.D. 150mm / 165mm For Rear Hub

FH DH41SB

| | | | |
|-------------|-------|------------------|--------|
| Weight | 261g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 110mm |
| Gauge | 14 | Axle | Ø20mm |
| P.C.D. | 58mm | Flange To Flange | 60.4mm |



Not Included

RH DH12SB

| | | | |
|-------------|-------|------------------|---------|
| Weight | 492g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 150mm |
| Gauge | 14 | Axle | Ø12mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 74.45mm |



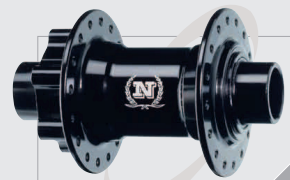
Not Included

RH DH42SB

| | | | |
|-------------|-------|------------------|--------|
| Weight | 526g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 165mm |
| Gauge | 14 | Axle | Ø12mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 87.7mm |



Not Included



| Specification | Axle Material |
|---------------|---------------|
| M12 x (215) | SCM415 |



Alloy Dirt Jump Hubs - Disc

O.L.D. 135mm
Single Speed Cassette Dirt Jump Hub
10mm / 14mm Hollow Axle Available



* Hollow Axle

RH D256SBT-14H

| | | | |
|-------------|-------|------------------|--------|
| Weight | 664g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | M14mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 4 | Flange To Flange | 75.5mm |

* D256SBT-14H — M14mm Hollow Axle.
* D256SBT-14S — M14mm Solid Axle.
* D256SBT — M10mm Solid Axle.



RH D252SBT

| | | | |
|-------------|-------|------------------|--------|
| Weight | 480g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | M10mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 4 | Flange To Flange | 75.5mm |

DOWNHILL

DIRT JUMP



MTB Disc Hubs

Superb Generation 3 in 1
Fast / Easy Changing

TYPE 1



FH D661CB Type 1

| | | | |
|-------------|-------|------------------|----------|
| Weight | 296g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 58mm | Axle Material | AL |
| | | Flange To Flange | 60.4mm |

RH D662CB Type 1

| | | | |
|-------------|-------|------------------|-----------|
| Weight | 439g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |



For 5mm QR

For Reference only



FH D661SB Type 1

| | | | |
|-------------|-------|------------------|----------|
| Weight | 309g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9x108mm |
| P.C.D. | 58mm | Axle Material | AL |
| | | Flange To Flange | 60.4mm |

RH D662SB Type 1

| | | | |
|-------------|-------|------------------|-----------|
| Weight | 447g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10x145mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |



FUNCTION 3 IN 1 MTB / CX



All Mountain

The 3 in 1 hubs are the most wanted hub in the market up to date,
best for aftermarket and specially for wheelset builder.

TYPE 2



FH D661CB Type 2

| | | | |
|-------------|-------|------------------|--------|
| Weight | 292g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9mm |
| P.C.D. | 58mm | Axle Material | AL |
| | | Flange To Flange | 60.4mm |

RH D662CB Type 2

| | | | |
|-------------|-------|------------------|--------|
| Weight | 468g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |



For 9/10mm Thru QR

For Reference only



FH D661SB Type 2

| | | | |
|-------------|-------|------------------|--------|
| Weight | 306g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | Ø9mm |
| P.C.D. | 58mm | Axle Material | AL |
| | | Flange To Flange | 60.4mm |

RH D662SB Type 2

| | | | |
|-------------|-------|------------------|--------|
| Weight | 477g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø10mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |



FUNCTION 3 IN 1 ALL MOUNTAIN



DOWNHILL

Type 1 For 5mm QR, Type 2 For 9mm / 10mm Through QR,
Type 3 For 20mm / 12mm Through Axle

TYPE 3



FH D661CB Type 3

| | | | |
|-------------|-------|------------------|--------|
| Weight | 265g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 110mm |
| Gauge | 14 | Axle | Ø20mm |
| P.C.D. | 58mm | Flange To Flange | 60.4mm |

RH D662CB Type 3

| | | | |
|-------------|-------|------------------|--------|
| Weight | 434g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø12mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |



For 20/12mm Thru Axle

For Reference only

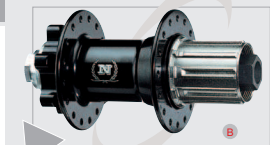


FH D661SB Type 3

| | | | |
|-------------|-------|------------------|--------|
| Weight | 268g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 110mm |
| Gauge | 14 | Axle | Ø20mm |
| P.C.D. | 58mm | Flange To Flange | 60.4mm |

RH D662SB Type 3

| | | | |
|-------------|-------|------------------|--------|
| Weight | 443g | Sealed Bearings | |
| Spoke Holes | 32 36 | O.L.D. | 135mm |
| Gauge | 14 | Axle | Ø12mm |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 3 | Flange To Flange | 58.4mm |



FUNCTION 3 IN 1 DOWNHILL

BMX

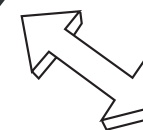
P40 . P41

BMX One Model Two Systems

The System of Dirt Jump Drive Unit & Cassette



BMX Drive Unit



BMX Cassette



All photos taken by Karol Breyer

BMX



Alloy BMX Hubs 2 IN 1

Easy To Change In Between Cassette And Drive Unit

Hollow Axle Available

Weight May Be Different Refer To Axle Length



RH F176SBT-14H Drive Unit

| | | | |
|-------------|------|------------------|-------|
| Weight | 524g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 110mm |
| Gauge | | Axle | M14 |
| P.C.D. | 49mm | Axle Material | CRMO |
| Pawls | 4 | Flange To Flange | 57mm |



RH F176SBT-14S Cassette

| | | | |
|-------------|------|------------------|-------|
| Weight | 487g | Sealed Bearings | |
| Spoke Holes | | O.L.D. | 110mm |
| Gauge | | Axle | M14 |
| P.C.D. | 49mm | Axle Material | CRMO |
| Pawls | 4 | Flange To Flange | 57mm |



3D Explotion

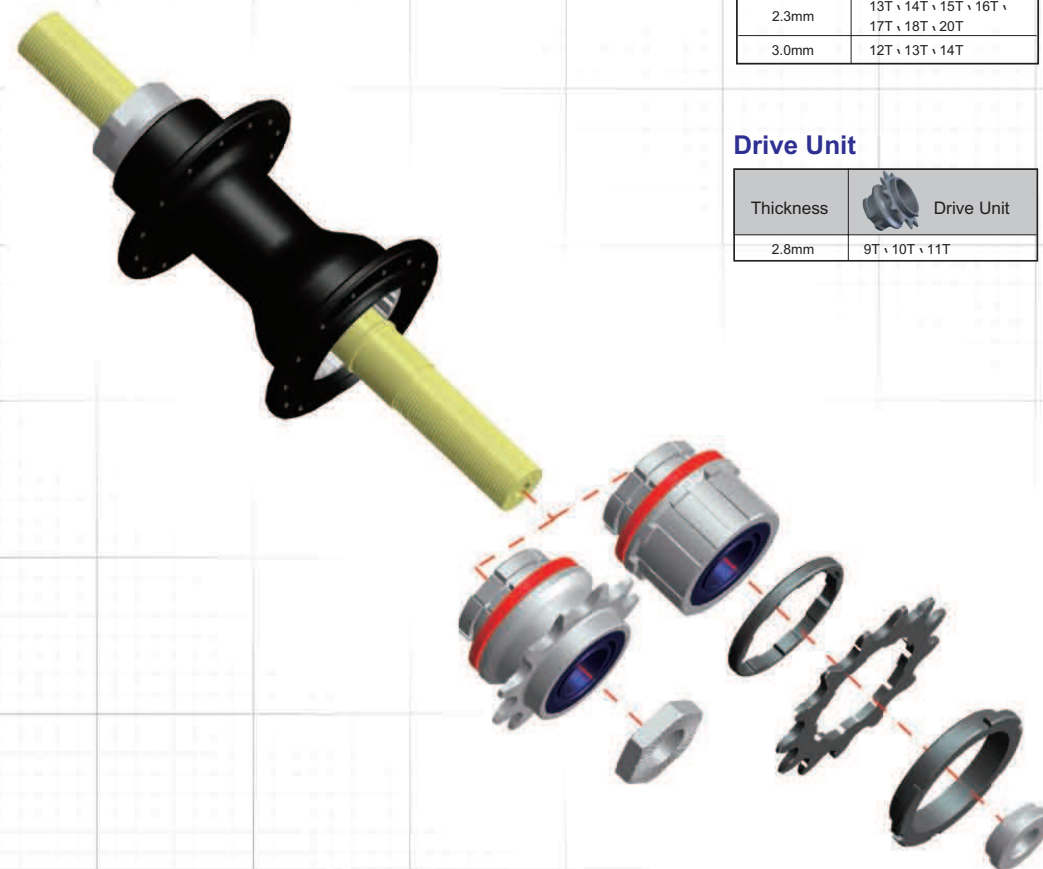
One Model Two Systems

Cassette

| Thickness | Sprocket |
|-----------|-----------------------------------|
| 2.3mm | 13T, 14T, 15T, 16T, 17T, 18T, 20T |
| 3.0mm | 12T, 13T, 14T |

Drive Unit

| Thickness | Drive Unit |
|-----------|--------------|
| 2.8mm | 9T, 10T, 11T |



Explanation :

F176SBT 3/8" Solid Axle

* For 3/8" Hollow Axle Specify in Order

F176SBT-14S ... M14 Solid Axle

F176SBT-14H ... M14 Hollow Axle



Alloy BMX Hubs M14 Cassette

For Racing BMX Bike
Hollow Axle Available



FH 765SBT

| | | | |
|-------------|------|------------------|-------|
| Weight | 258g | Sealed Bearings | |
| Spoke Holes | 36 | O.L.D. | 100mm |
| Gauge | 14 | Axle | 3/8" |
| P.C.D. | 41mm | Axle Material | CRMO |
| | | Flange To Flange | 72mm |



RH F036SBT

| | | | |
|-------------|-------|------------------|--------|
| Weight | 616g | Sealed Bearings | |
| Spoke Holes | 36 48 | O.L.D. | 110mm |
| Gauge | 14 | Axle | 3/8" |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 4 | Flange To Flange | 58.4mm |

*L.S.D. Available



RH D066SBT

| | | | |
|-------------|-------|------------------|-------|
| Weight | 586g | Sealed Bearings | |
| Spoke Holes | 36 48 | O.L.D. | 110mm |
| Gauge | 14 | Axle | 3/8" |
| P.C.D. | 58mm | Axle Material | CRMO |
| Pawls | 4 | Flange To Flange | 59mm |



Alloy BMX Hubs Freewheel

For Heavy Duty BMX Bike
Hollow Axle Available
L.S.D. / Flip-Flop Available



FH A075SBT

| | | | |
|-------------|-------|------------------|-------------|
| Weight | 440g | Sealed Bearings | |
| Spoke Holes | 36 48 | O.L.D. | 100mm |
| Gauge | 14 | Axle | M14 or 3/8" |
| P.C.D. | 45mm | Axle Material | CRMO |
| | | Flange To Flange | 72mm |



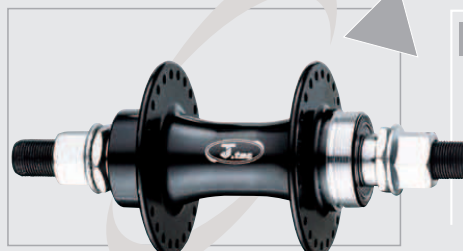
RH A076SBT

| | | | |
|-------------|-------|------------------|-------|
| Weight | 459g | Sealed Bearings | |
| Spoke Holes | 36 48 | O.L.D. | 110mm |
| Gauge | 14 | Axle | M14 |
| P.C.D. | 49mm | Axle Material | CRMO |
| | | Flange To Flange | 58mm |



FH A01CSBT

| | | | |
|-------------|-------|------------------|-------|
| Weight | 438g | Sealed Bearings | |
| Spoke Holes | 36 48 | O.L.D. | 100mm |
| Gauge | 14 | Axle | M14 |
| P.C.D. | 62mm | Axle Material | CRMO |
| | | Flange To Flange | 71mm |



RH A01ESBT

| | | | |
|-------------|-------|------------------|-------|
| Weight | 479g | Sealed Bearings | |
| Spoke Holes | 36 48 | O.L.D. | 110mm |
| Gauge | 14 | Axle | M14 |
| P.C.D. | 62mm | Axle Material | CRMO |
| | | Flange To Flange | 60mm |



Quick Release

ADJUSTER KNOB
Set the tension in the quick release system.

SPRING
Keep the lever and the lock nut equal distances apart.

LEVER KNOB

SHAFT
Go through the Hub and drop-outs. It can be fastened with the lock nut and lever. It's strong, durable, and rust-free.
* Option : CRMO, Stainless, Titanium

LEVER
Comfortable to use and releases smoothly.



Accessory

Center Lock Parts

| REF. PHOTO | | | | | | |
|------------|----------|----------|---------------|----------|----------|----------|
| ITEM NO. | XC-COVER | XC-CL-AD | XC-CL-6 BOLTS | XC-CL-LR | DH-CL-AD | DH-CL-LR |

Sealed Bearings Cassette Bodies

| Road / MTB Alloy | Road Alloy | Standard | Road / MTB Ti |
|---|-------------------------------|--|--|
| 86g A F292SB.....108g ROAD C D662SB.....78g MTB | 80g A F392SB.....114g ROAD | 92g A F292SB-S10.....102g ROAD | 106g A Can be system : A B C |
| Road Steel | MTB Steel | Light Steel | BMX Steel |
| 180g A D042SB.....160g B D662SB.....145g | 148g | 180g A D042SB.....160g B D662SB.....145g | 121g 9T.....103g 10T.....114g 11T.....125g BMX-DU BMX-C |

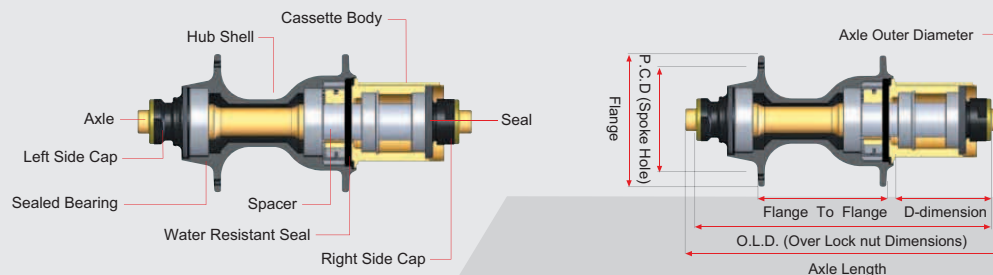
HUB COMPONENTS



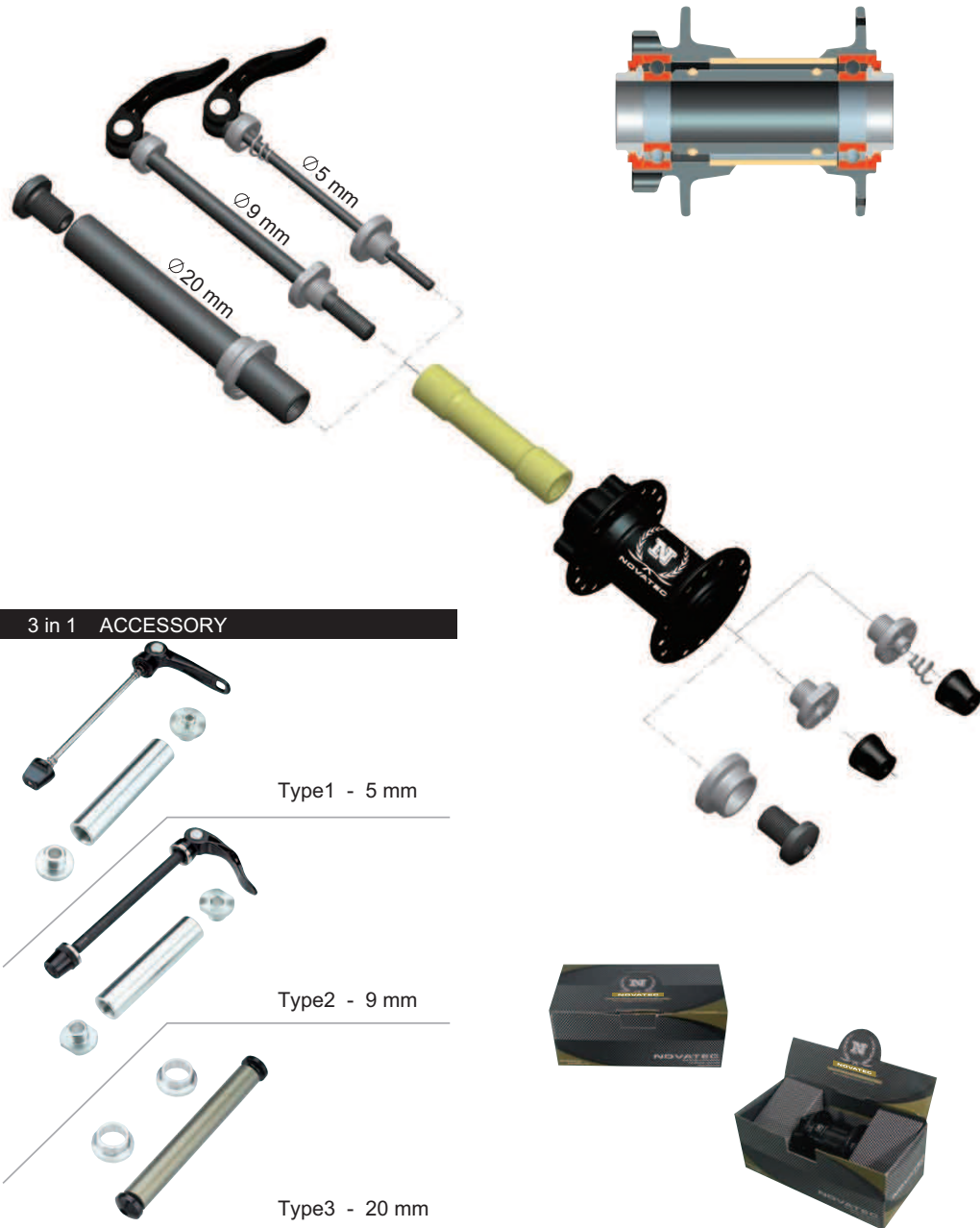
After Market Packages



SPECIFICATION

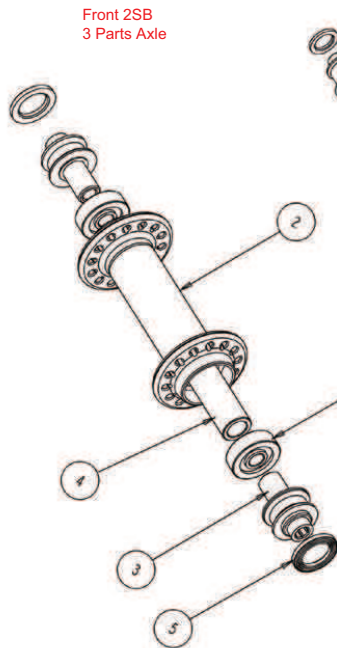
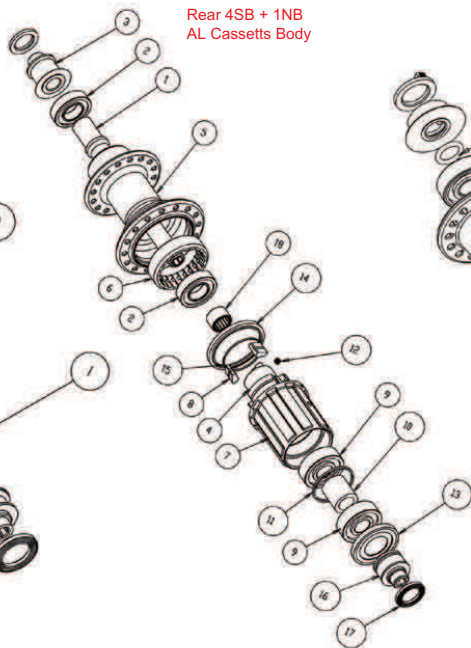


D661SB (3 in 1 System) 3D Explotion D661CB

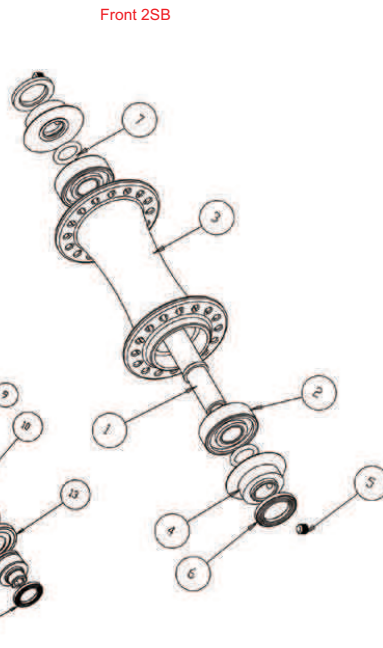
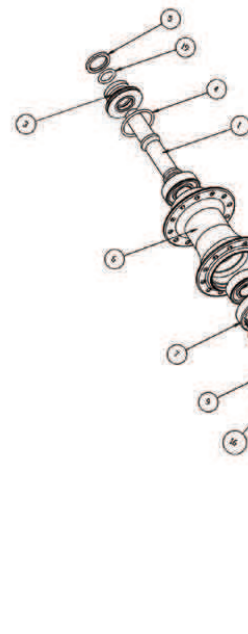
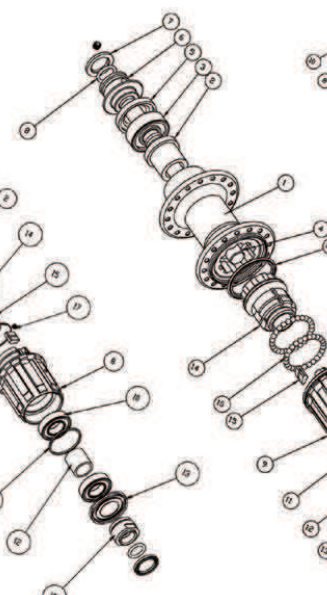
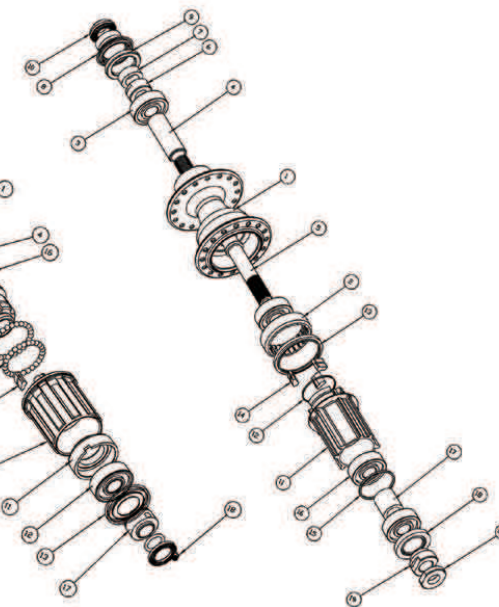


D662SB (3 in 1 System) 3D Explotion D662CB



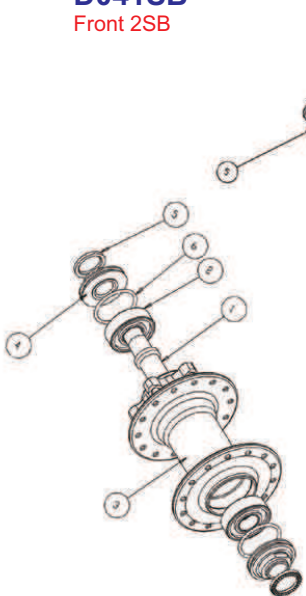
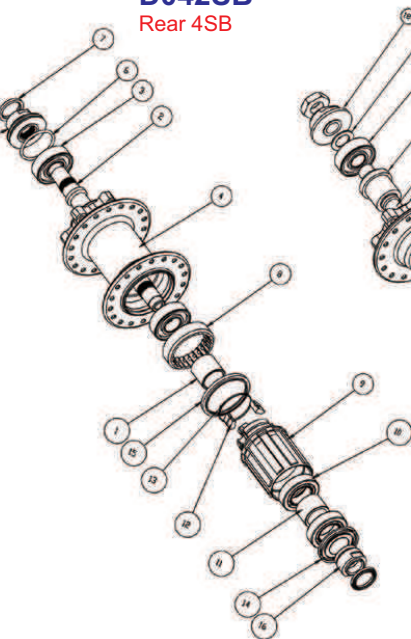
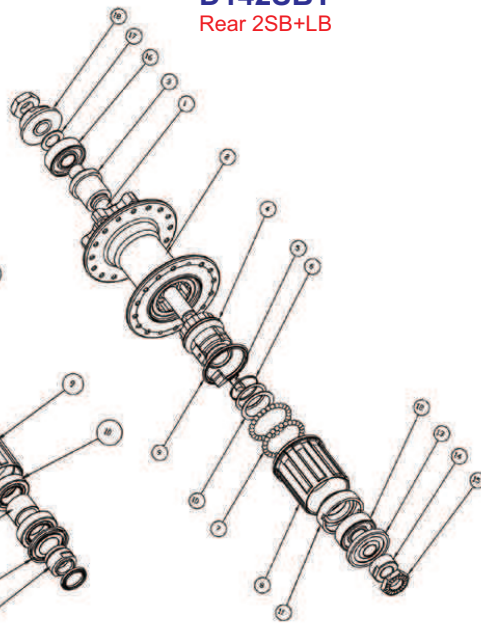
System of **ROAD** Hub**A291SB**Front 2SB
3 Parts Axle**F292SB**Rear 4SB + 1NB
AL Cassetts Body**A141SB**

Front 2SB

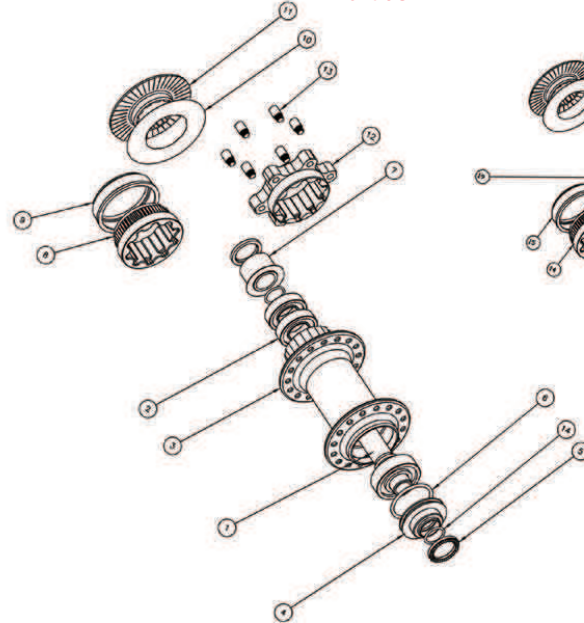
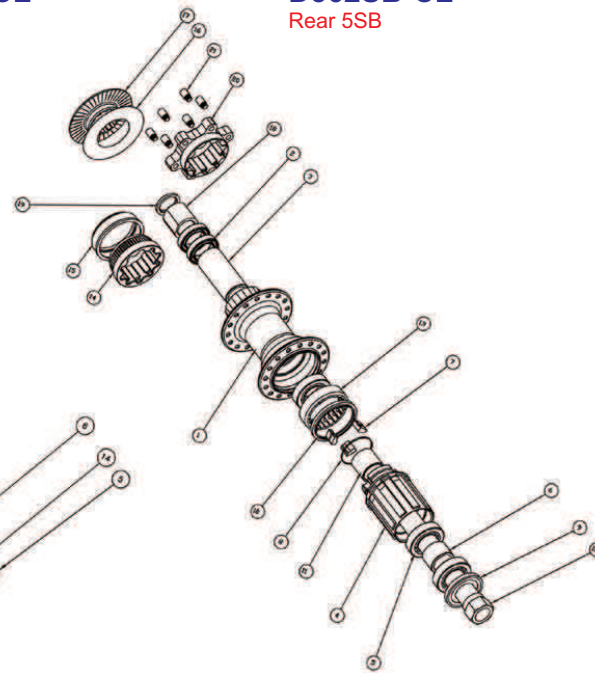
**F162SB**Rear 4SB
AL Cassette Body**F192SB**Rear 2SB+LB
Steel Cassette Body
SMN8/9 only**F472SBT**Rear 4SB
Steel Cassette Body
CAMPY only

| A291SB | DESCRIPTION | PCS. | F292SB | DESCRIPTION | PCS. | A141SB | DESCRIPTION | PCS. |
|--------|-------------|------|--------|-----------------------|------|--------|-------------|------|
| 1 | Bearing | 2 | 1 | Axle | 1 | 1 | Axle | 1 |
| 2 | Hub Shell | 1 | 2 | Bearing | 2 | 2 | Bearing | 2 |
| 3 | Side Cap | 2 | 3 | Left Side Cap | 1 | 3 | Hub Shell | 1 |
| 4 | Long Spacer | 1 | 4 | Spacer | 1 | 4 | Side Cap | 2 |
| 5 | Washer | 2 | 5 | Hub Shell | 1 | 5 | Nut | 2 |
| 6 | | | 6 | Ratchet Ring | 1 | 6 | Washer | 2 |
| 7 | | | 7 | Cassette Body | 1 | 7 | O-Ring | 2 |
| 8 | | | 8 | Pawl | 3 | 8 | | |
| 9 | | | 9 | Bearing | 2 | 9 | | |
| 10 | | | 10 | Long Spacer | 1 | 10 | | |
| 11 | | | 11 | C-Ring | 1 | 11 | | |
| 12 | | | 12 | Stop Nut | 1 | 12 | | |
| 13 | | | 13 | Oil Seal | 1 | 13 | | |
| 14 | | | 14 | Water Resistance Seal | 1 | 14 | | |
| 15 | | | 15 | Spring | 1 | 15 | | |
| 16 | | | 16 | Right Side Cap | 1 | 16 | | |
| 17 | | | 17 | Washer | 2 | 17 | | |
| 18 | | | 18 | Needle Bearing | 1 | 18 | | |
| 19 | | | 19 | | | 19 | | |
| 20 | | | 20 | | | 20 | | |

| F162SB | DESCRIPTION | PCS. | F192SB | DESCRIPTION | PCS. | F472SBT | DESCRIPTION | PCS. |
|--------|-----------------------|------|--------|----------------|------|---------|---------------------------|------|
| 1 | Axle | 1 | 1 | Hub Shell | 1 | 1 | Hub Shell | 1 |
| 2 | Bearing | 2 | 2 | Stator Washer | 1 | 2 | Ratchet Ring | 1 |
| 3 | Left Side Cap | 1 | 3 | Bearing | 1 | 3 | Bearings | 2 |
| 4 | O-Ring | 1 | 4 | Axle | 1 | 4 | Spacer | 1 |
| 5 | Washer | 2 | 5 | Oil Seal | 1 | 5 | Axle | 1 |
| 6 | Hub Shell | 1 | 6 | Side Cap | 1 | 6 | Nut | 1 |
| 7 | Ratchet Ring | 1 | 7 | Washer | 2 | 7 | Spacer | 1 |
| 8 | Cassette Body | 1 | 8 | O-Ring | 2 | 8 | Double Oil Seal | 1 |
| 9 | Spring | 1 | 9 | Cassette Body | 1 | 9 | Side Cap Seal | 1 |
| 10 | Bearings | 2 | 10 | Steel Ball | 52 | 10 | T-Nut | 1 |
| 11 | C-Ring | 1 | 11 | Cup | 1 | 11 | Steel Campy Cassette Body | 1 |
| 12 | Short Spacer | 1 | 12 | Bearing | 1 | 12 | Spring | 1 |
| 13 | Oil Seal | 1 | 13 | Oil Seal | 1 | 13 | Water Resistance Seal | 1 |
| 14 | Water Resistance Seal | 1 | 14 | Ratchet | 1 | 14 | Pawl | 3 |
| 15 | Long Spacer | 1 | 15 | Pawl | 2 | 15 | C-Ring | 1 |
| 16 | Pawl | 3 | 16 | Seal | 1 | 16 | Bearing | 2 |
| 17 | Stop Nut | 1 | 17 | Right Side Cap | 1 | 17 | Long Spacer | 1 |
| 18 | Right Side Cap | 1 | 18 | Nut | 2 | 18 | Oil Seal | 1 |
| 19 | O-Ring | 2 | 19 | | | 19 | Right Side Cap | 1 |
| 20 | | | 20 | | | 20 | Stop Nut | 1 |

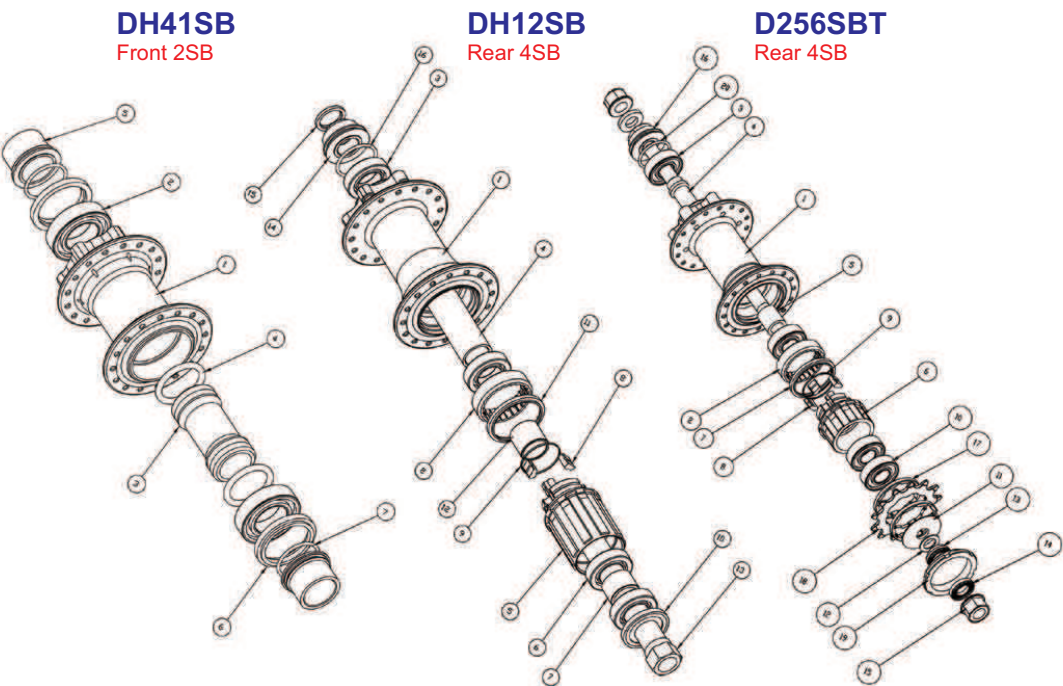
System of **MTB** Hub**D041SB**
Front 2SB**D042SB**
Rear 4SB**D142SBT**
Rear 2SB+LB

| D041SB | DESCRIPTION | PCS. | D042SB | DESCRIPTION | PCS. | D142SBT | DESCRIPTION | PCS. |
|--------|-------------|------|--------|-----------------------|------|---------|---------------------|------|
| 1 | Axle | 1 | 1 | Long Spacer | 1 | 1 | Axle | 1 |
| 2 | Bearing | 2 | 2 | Axle | 1 | 2 | Hub Shell | 1 |
| 3 | Hub Shell | 1 | 3 | Bearing | 2 | 3 | Stator Washer | 1 |
| 4 | Side Cap | 2 | 4 | Hub Shell | 1 | 4 | Ratchet | 1 |
| 5 | Washer | 2 | 5 | Left Side Cap | 1 | 5 | Pawl | 2 |
| 6 | O-Ring | 2 | 6 | O-Ring | 1 | 6 | Spring | 1 |
| 7 | | | 7 | Washer | 2 | 7 | Steel Ball | 2 |
| 8 | | | 8 | Ratchet Ring | 1 | 8 | Steel Cassette Body | 1 |
| 9 | | | 9 | Cassette Body | 1 | 9 | Seal | 1 |
| 10 | | | 10 | Bearing | 2 | 10 | Washer | 2 |
| 11 | | | 11 | Spacer | 1 | 11 | Cup | 1 |
| 12 | | | 12 | Pawl | 3 | 12 | Bearing | 1 |
| 13 | | | 13 | Spring | 1 | 13 | Oil Seal | 1 |
| 14 | | | 14 | Oil Seal | 1 | 14 | Nut | 1 |
| 15 | | | 15 | Water Resistance Seal | 1 | 15 | Nut | 2 |
| 16 | | | 16 | Right Side Cap | 1 | 16 | Bearing | 1 |
| 17 | | | 17 | | | 17 | Spacer | 1 |
| 18 | | | 18 | | | 18 | Left Side Cap | 1 |
| 19 | | | 19 | | | 19 | | |
| 20 | | | 20 | | | 20 | | |

System of **MTB-CL** Hubs**D361SB-CL**
Front 3SB**D362SB-CL**
Rear 5SB

| D361SB-CL | DESCRIPTION | PCS. | D362SB-CL | DESCRIPTION | PCS. |
|-----------|---------------------|------|-----------|-----------------------|------|
| 1 | Axle | 1 | 1 | Hub Shell | 1 |
| 2 | Bearing | 3 | 2 | Bearing | 3 |
| 3 | Hub Shell | 1 | 3 | Long Spacer | 1 |
| 4 | Right Side Cap | 1 | 4 | Cassette Body | 1 |
| 5 | Washer | 2 | 5 | Bearing | 2 |
| 6 | O-Ring | 1 | 6 | Spacer | 1 |
| 7 | Left Side Cap | 1 | 7 | Pawl | 3 |
| 8 | Center Lock Adapter | 1 | 8 | Spring | 1 |
| 9 | Cover Rubber Cap | 1 | 9 | Oil Seal | 1 |
| 10 | Lock Ring Washer | 1 | 10 | Water Resistance Seal | 1 |
| 11 | Lock Ring | 1 | 11 | Long Spacer | 1 |
| 12 | 6 Bolt Adapter | 1 | 12 | Axle | 1 |
| 13 | Pin | 6 | 13 | Ratchet Ring | 1 |
| 14 | O-Ring | 2 | 14 | Center Lock Adapter | 1 |
| 15 | | | 15 | Cover Rubber Cap | 1 |
| 16 | | | 16 | Lock Ring Washer | 1 |
| 17 | | | 17 | Lock Ring | 1 |
| 18 | | | 18 | Left Side Cap | 1 |
| 19 | | | 19 | Washer | 1 |
| 20 | | | 20 | 6 Bolt Adapter | 1 |
| 21 | | | 21 | Pin | 6 |

System of DH / DIRT JUMP Hub



| DH41SB | DESCRIPTION | PCS. | DH12SB | DESCRIPTION | PCS. | D256SBT | DESCRIPTION | PCS. |
|--------|-------------|------|--------|-----------------------|------|---------|-----------------------|------|
| 1 | Hub Shell | 1 | 1 | Hub Shell | 1 | 1 | Hub Shell | 1 |
| 2 | Bearing | 2 | 2 | Ratchet Ring | 1 | 2 | Ratchet Ring | 1 |
| 3 | Spacer | 1 | 3 | Bearing | 2 | 3 | Bearing | 2 |
| 4 | O-Ring | 2 | 4 | Spacer | 1 | 4 | Axle | 1 |
| 5 | Spacer | 2 | 5 | Cassette Body | 1 | 5 | Long Spacer | 1 |
| 6 | Side Cap | 2 | 6 | Bearing | 2 | 6 | Cassette Body | 1 |
| 7 | O-Ring | 2 | 7 | Spacer | 1 | 7 | Water Resistance Seal | 1 |
| 8 | | | 8 | Pawl | 3 | 8 | Pawl | 4 |
| 9 | | | 9 | Spring | 1 | 9 | Spring | 1 |
| 10 | | | 10 | Oil Seal | 1 | 10 | Bearing | 2 |
| 11 | | | 11 | Water Resistance Seal | 1 | 11 | Dust Cap | 1 |
| 12 | | | 12 | Long Spacer | 1 | 12 | Spacer | 1 |
| 13 | | | 13 | Axle | 1 | 13 | T-Nut | 1 |
| 14 | | | 14 | Left Side Cap | 1 | 14 | Washer | 2 |
| 15 | | | 15 | Washer | 1 | 15 | Nut with Washer | 2 |
| 16 | | | 16 | O-Ring | 1 | 16 | Left Side Cap | 1 |
| 17 | | | 17 | | | 17 | Spacer | 2 |
| 18 | | | 18 | | | 18 | Sprocket | 1 |
| 19 | | | 19 | | | 19 | Lock Ring | 1 |
| 20 | | | 20 | | | 20 | O-Ring | 1 |

* Colors of parts are for reference only Red color = Oil Seal

P54, P55

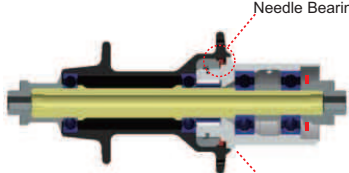
ROAD



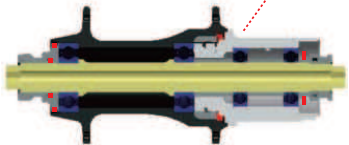
A291SB



A141SB

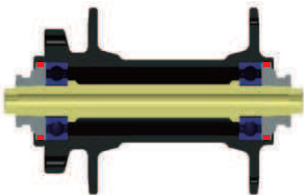


F292SB

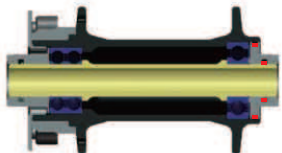


F162SB

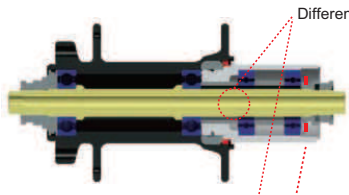
MTB



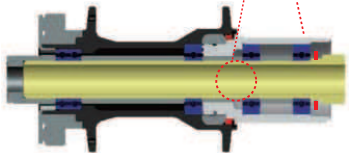
D041SB



D361SB-CL



D042SB

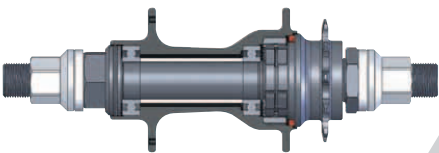


D362SB-CL

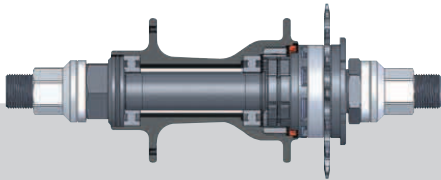
BMX

Two Systems One Model

F176SBT-14H Drive Unit



F176SB-14H Cassette



RACER The team diaries

It's time to take stock of your best riding moments.

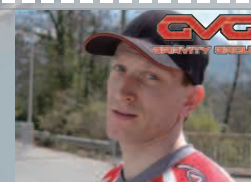
From coastal views and crumbling glaciers, to curious wildlife and terrifying contraptions, here's some of our favourite snapshots from the saddle this year.



Filip Polc



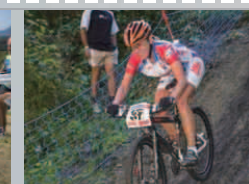
Sam Blenkinsop



Leiv Ove Nordmark



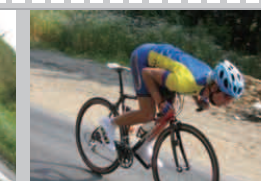
Janka Stevkova



Janka Stevkova's
Photos taken by Peter Mihalovic



Tarjan Zoltan



AGENTS & LOCATION



| | | |
|----------------------|--|---|
| BULGARIA | CROSS Ltd. cross@crosscycle.com | +359-96-300 715 P58 . P59 www.crosscycle.com |
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AGENTS The agent location

We created our Agents Network to be closer to you.

To use our high performance products, simply contact with your nearest agent for further service and information.
Any recommendation, suggestion from you are welcome.