



SUGINO

SPIRIT of JAPAN

Bicycle PARTS

2018

2018

Road Bike / Touring / etc.

BRAND STORY

Sugino has over a century of experience as a bicycle parts maker focusing on high-end parts.

Because of its reliable quality, *Sugino* also produces OEM parts for well-known complete bicycle makers.

Especially, its drive-train parts are chosen by many athletes in various competitions, such as Tour de France, Giro d'Italia, World Championship, Olympics, etc. and contribute their winnings.

Thus, with the know-how accumulated through its long experience, *Sugino* can offer higher-quality parts.

SUGINO ENGINEERING CORPORATION

<https://www.suginoltd.co.jp/us/>

Jun. 2018 Sugino Printed in Japan

Without notice due to continual improvements.



OX2

Ø24mm Through Axle



All-round chainwheel set, offers high performance in various fields. Unique system "Compact Plus+" enables the use of super small inner rings. New IDS24 axle engineered at highest level of "precision" provides "higher durability" and enhances overall performance.



NEW

OX2-901D Compact Plus+ OX2-901D Classic Compact Plus+

- P.C.D. : 110mm - 110mm / 74mm
- Axle Type : IDS24
- Compatibility : SHIMANO 11 Speed / 10 Speed
- Chain Line : 43.5mm
- Q-Factor : 145mm
- Crank Material : Hard forged aluminum alloy
- Crank Length : 160 / 165 / 167.5 / 170 / 172.5 / 175mm
- Color : Silver / Black
- Combinations : 52-36T
50-36T / 50-34T
48-36T / 48-34T / 48-32T
46-36T / 46-34T / 46-32T / 46-30T
44-32T / 44-30T



*The same specification but with different graphics.

New IDS24 AXLE

Ø24mm Through Axle



New IDS24 AXLE

High level of strength and corrosion resistance are achieved. It is designed to provide optimal stress distribution, and manufactured in ultra-high precision, with beautiful gold finish.

Adjustable Pressure

Special design for OX2 for fine pressure adjustment to create perfect fit, which ensures utmost performance of high precision bearing.



Adjustable Bolt (M18)

What is Compact Plus+?

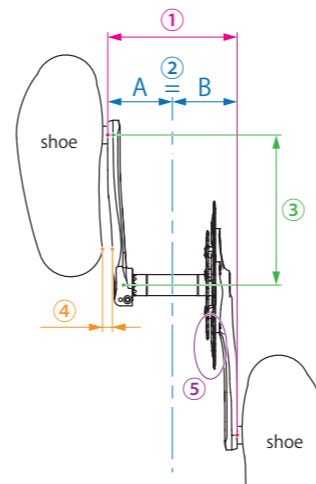
Sugino Original mounting pattern, inner ring can either be a 110mm or 74mm PCD, enables the use of super small inner ring 30T & 32T, offers great performance gain at hill climb, cyclocross, granfond, etc. where physical strength is required.



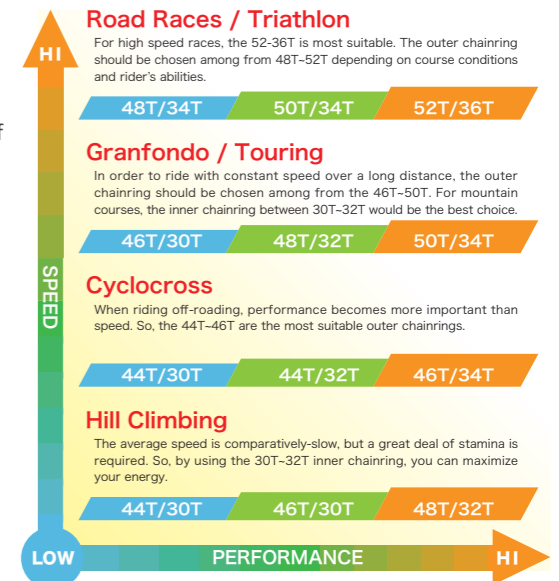
Special feature of the OX crank is dual-PCD design. Inner ring can either be a 110mm or 74mm PCD. The system called "Compact Plus+" enables the use of super small inner rings and ensures a wide range of gearing ratios.

Compact		Compact Plus+	
PCD 110mm		PCD 110mm-74mm	
52-36T		48-32T	
50-36T / 50-34T		46-32T / 46-30T	
48-36T / 48-34T		44-32T / 44-30T	
46-36T / 46-34T			

Not only a wide range of gearing ratios, OX offers superior shifting for various riders in various scenes. Thus, we never compromise on quality of performance.



- ① Super Low Q-factor 145mm
- ② Perfectly symmetrical Q-factor
It ensures smoother and efficient pedaling.
- ③ Crank lengths
Available from 160mm up to 175mm depending on physical needs and riding styles.
- ④ Large ankle clearance
It keeps the shoe from rubbing the crank.
- ⑤ Shifting performance
Perfect shifting, no chain troubles such as chain drop.



ACCESSORY



*See page 10.

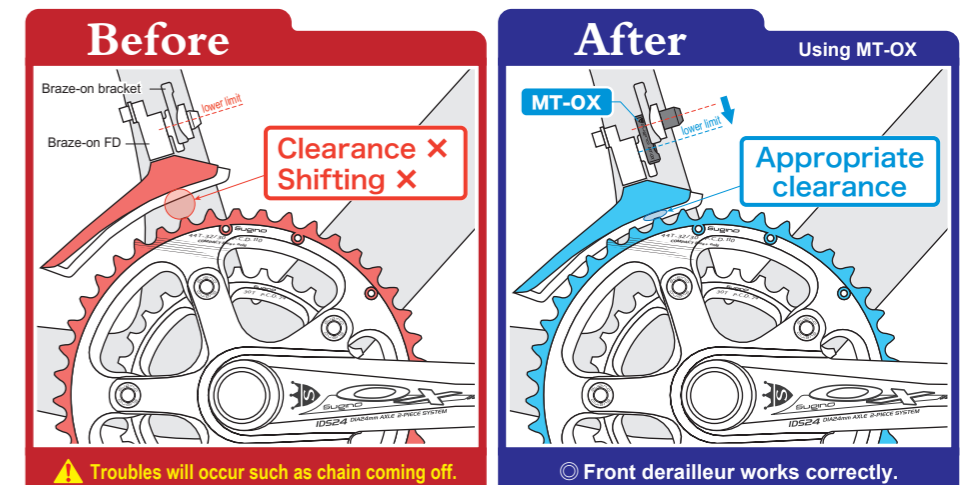
NEW Adjustable FD MOUNT (MT-OX)

When a 44T outer chainring is used,



- MT-OX is an adapter to mount braze-on front derailleur low enough to accommodate small outer chainrings.
- Specific to Shimano 11 speed front derailleur.

*Before use, please check "Front derailleur position for installing chainwheel" in page 9.



FD cannot be adjusted low enough. If gap between FD and outer ring is too wide, FD won't work correctly. It may cause damage to other parts and even result in serious accidents.

MT-OX allows lower FD mounting to accommodate OX series compact rings. Proper FD position helps you to get the most performance, comfort and safety.

New IDS24

OX2

Ø24mm Through Axle
OX2-901D (refer to P.1-2) featuring new aerodynamic "AIR" chainring for racing



NEW OX2-901D AIR

P.C.D. : 110mm
Axle Type : IDS24
Compatibility : SHIMANO 11 Speed / 10 Speed
Chain Line : 43.5mm
Q-Factor : 145mm
Crank Material : Hard forged aluminum alloy
Crank Length : 160 / 165 / 167.5 / 170 / 172.5 / 175mm
Color : Black
Combinations : 52-36T / 50-34T

*Compact Plus+ is not available.



AIR

- Aerodynamic design suitable for racing
- High rigidity and perfect power transmission
- Precision machined ultra-round ring, no wobbling less chain noise
- Smooth shifting without loss of power

Aerodynamic chainring available in 50T & 52T, suitable for racing. Precisely machined recesses provide a good balance between weight-saving and rigidity, and give more sporty appearance.

CXC

Ø24mm Through Axle
Specialized for Cyclocross with CYCLOID II and new IDS24 axle



CXC2-901D

P.C.D. : 110mm - 74mm
Axle Type : IDS24
Compatibility : SHIMANO 11 Speed / 10 Speed
Chain Line : 43.5mm
Q-Factor : 145mm
Crank Material : Hard forged aluminum alloy
Crank Length : 160 / 165 / 167.5 / 170 / 172.5 / 175mm
Color : Black
Combinations : 46-36T



ACCESSORY



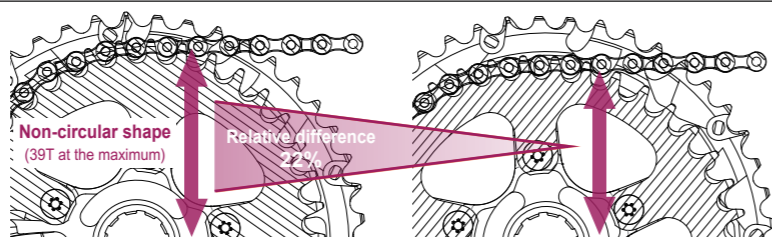
*See page 10.

Outer Chaining

High-end, aerodynamic chainring, offers superior performance in all high-speed sections where sprint is necessary. Having large surface area, it effectively pushes away dirt and mud.

Inner Chaining

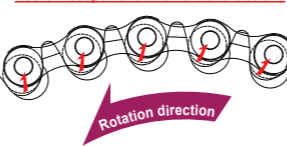
Non-circular inner ring alternates gearing between 32T and 39T, allows you to quickly spin through the top and bottom dead spots. Incorporating Autofocus mechanism, it helps you ride through difficult terrains such as mud, soil and steel slope.



What is Autofocus mechanism?

When the great amount of power is produced in the pedal stroke, the chain moves outward, and the ring increases the diameter to the maximum. As the gearing is modulated automatically according to the pedal power, you can get effective gearing throughout the pedal stroke.

At the most powerful moment of the stroke



- There is no need of pedal stroke analysis for detecting peak point or adjustment of mounting position.
- As positional relation with outer ring is fixed, excellent shifting is ensured.



The special tooth profile prevents chain-drop and mud clogging.

Bottom Bracket

BB converter series enables to install crankset with Ø24mm axle to various frame standards, offers smooth & long-lasting rotation and superior dust & water protection. For Sugino IDS24 series and Shimano Hollowtech II series.

*For product details, please refer to our other catalog [IDS24 Bottom Bracket 2018]

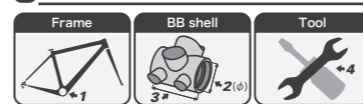
NEW

POWER SLEEVE (B.B. CONVERTER series)

Left-right integrated type of Bottom Bracket with special creak-free structure.



	BB386EVO	PF30	PF30A	BB30	BB30A
1	46mm	46mm	46mm	42mm	42mm
2	86.5mm	68mm	73mm	68mm	73mm
3	TL-PWS BB wrench set		TL-PWS BB wrench set		
4	TL-PWS 86 tool set		TL-PWS 86 tool set		



Crank compatibility
● Sugino IDS24 series
● Shimano Ø24mm axle



*Dedicated tools are required for installation and removal.

TOOL



TL-PWS BB wrench set



TL-PWS 86 tool set

NEW

B.B. CONVERTER

BB converter enables to install crankset with Ø24mm axle (Sugino, Shimano) to various frame standards.



	BSA	PF BB86	BB386EVO	PF30	PF30A	BB30	BB30A
1	BC1.37x24T	41mm	46mm	46mm	46mm	42mm	42mm
2	68mm	86.5mm	86.5mm	68mm	73mm	68mm	73mm
3	BB30-IDS24 Spacer		BB30-IDS24 Spacer				



Crank compatibility
● Sugino IDS24 series
● Shimano Ø24mm axle



NEW

Sugino BB90 SUPER CERAMIC

BB set specific to TREK-BB90, has superior water & dust protection and durability for continued high performance.



Frame
TREK-BB90 / BB95

Bearing
SUPER CERAMIC

Crank compatibility
● Sugino IDS24 series
● Shimano Ø24mm axle
*Same as TREK-BB90



EXP

Ø 30mm Through Axle



Pro race model, lightweight and high rigidity with Ø30mm axle (for PF30 / BB30), outstanding characteristics including Direct Drive, Super Aero.

Combination of aerodynamic "AIR" chainring and special graphic crank is added.



NEW



AIR

- Aerodynamic design suitable for racing
- High rigidity and perfect power transmission
- Precision machined ultra-round ring, no wobbling less chain noise
- Smooth shifting without loss of power

Aerodynamic chainring available in 50T & 52T, suitable for racing. Precisely machined recesses provide a good balance between weight-saving and rigidity, and give more sporty appearance.

"AIR" and special graphic model EXP110 AIR

P.C.D.	: 110mm
Axle Type	: IDS30
B.B.	: Choose from ①~④ at the lower right of page 6
Compatibility	: SHIMANO 11 Speed / 10 Speed
Chain Line	: 43.5mm
Q-Factor	: 145mm
Crank Material	: Hard forged aluminum alloy
Crank Length	: 165 / 167.5 / 170 / 172.5 / 175mm
Color	: Black
Combinations	: 52-36T / 50-34T / 48-34T / 46-34T

ACCESSORY



*See page 10.



*Special graphic for AIR version.



"ZEN STRADA", aero-shape big chainring EXP130 ZEN STRADA

P.C.D.	: 130mm
Axle Type	: IDS30
B.B.	: Choose from ①~④ at the lower right of page 6
Compatibility	: SHIMANO 11 Speed / 10 Speed
Chain Line	: 43.5mm
Q-Factor	: 145mm
Crank Material	: Hard forged aluminum alloy
Crank Length	: 165 / 167.5 / 170 / 172.5
Color	: Black
Combinations	: 54-42T / 54-39T / 53-42T / 53-39T



ZEN STRADA

- Aero-shape big chainring suitable for TT & triathlon
- The world highest level of rigidity
- Precision machined ultra-round ring, no wobbling less chain noise
- Smooth shifting without loss of power

ZEN STRADA is the only road model in ZEN series (high performance track chainring), having recesses on backside, it is big and extremely rigid, yet lightweight.

ACCESSORY



*See page 10.

EXP



PCD110mm model with various gearing options EXP110 - 901D

P.C.D.	: 110mm
Axle Type	: IDS30
B.B.	: Choose from ①~④ at the lower right of page 6
Compatibility	: SHIMANO 11 Speed / 10 Speed
Chain Line	: 43.5mm
Q-Factor	: 145mm
Crank Material	: Hard forged aluminum alloy
Crank Length	: 165 / 167.5 / 170 / 172.5 / 175mm
Color	: Black
Combinations	: 52-36T / 50-36T / 50-34T / 48-36T / 48-34T / 46-36T / 46-34T

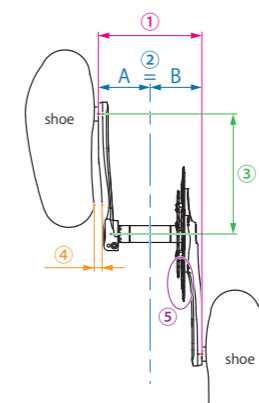
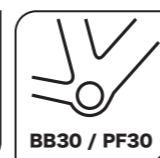
Entry-level model EXP110 - 601D

P.C.D.	: 110mm
Axle Type	: IDS30
B.B.	: Choose from ② or ④ at the lower right of page 6
Compatibility	: SHIMANO 11 Speed / 10 Speed
Chain Line	: 43.5mm
Q-Factor	: 145mm
Crank Material	: Hard forged aluminum alloy
Crank Length	: 165 / 167.5 / 170 / 172.5 / 175mm
Color	: Silver / Black
Combinations	: 52-36T / 50-36T / 50-34T / 48-36T / 48-34T / 46-36T / 46-34T

ACCESSORY



*See page 10.



- ① Super Low Q-factor 145mm
- ② Perfectly symmetrical Q-factor
It ensures smoother and efficient pedaling.
- ③ Crank lengths
Available from 165mm up to 175mm depending on physical needs and riding styles.
- ④ Large ankle clearance
It keeps the shoe from rubbing the crank.
- ⑤ Shifting performance
Perfect shifting, no chain troubles such as chain drop.

EXP series, with Ø30mm axle, extremely rigid, outstanding characteristics including Direct Drive, Super Aero, Super low Q-factor, guarantees remarkable performance gain at professional races, especially at triathlon, time trial where the biggest obstacle is air resistance.

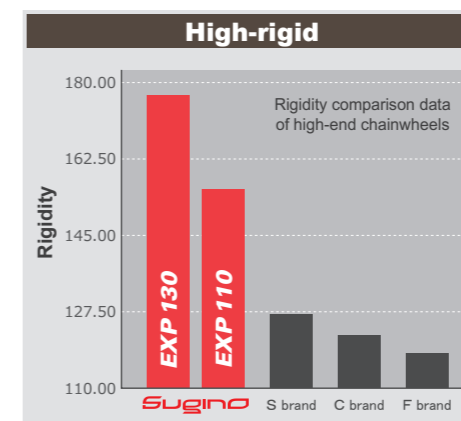


Super Aero

The spider arms are invisible when viewed from the front of the bike, which maximizes aerodynamic effect.

Direct Drive

As the spider arms are flat, and lie in the same plane as the chainring, the pedal power is directly transmitted to the drive.



① PF30 CE (Ceramic bearing)



② PF30 ST (Steel bearing)



③ BB-EXP30 CE (Ceramic bearing)



④ BB-EXP30 ST (Steel bearing)

Mighty

Square Taper Axle



The classic style, square taper chainwheel set, 11 speed compatible, excellent in shifting, incorporating latest technologies.



Mighty Tour - 901D

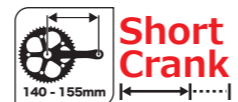
- P.C.D. : 110mm
- Type : 4-TAPER (JIS)
- B.B. : CBBAL-110 (with BB)
- Compatibility : SHIMANO 11 Speed / 10 Speed
- Chain Line : 43.5mm
- Crank Material : Forged aluminum alloy
- Crank Length : 160 / 165 / 167.5 / 170 / 172.5 / 175mm
- Color : Silver / Black
- Combinations : 52-36T
50-36T / 50-34T
48-36T / 48-34T
46-36T / 46-34T



The classic style unaltered through time, succeeded the name of

SUGINO MIGHTY

Mighty Series is popular for its classic, slim style and strikingly beautiful finish. For longtime bike lovers, Mighty series makes your bike more grand and gorgeous.



Short Crank

Available from 140 to 155mm, hard-to-find sizes, for more comfortable and efficient ride for shorter riders.



Black



Mighty series is 11 speed / 10 speed compatible and works with many of the current Shimano components, used on JIS square taper BB (CBBAL-110).

ACCESSORY



*See page 10.

Very short crank model

Mighty Mignon - 901D

- P.C.D. : 110mm
- Axle Type : 4-TAPER (JIS)
- B.B. : CBBAL-110 (with BB)
- Compatibility : SHIMANO 11 Speed / 10 Speed
- Chain Line : 43.5mm
- Crank Material : Forged aluminum alloy
- Crank Length : 140 / 145 / 150 / 155mm
- Color : Silver / Black
- Combinations : 52-36T
50-36T / 50-34T
48-36T / 48-34T
46-36T / 46/34T



Touring

ALPINA2



ALPINA2 Triple

- P.C.D. : 110mm - 110mm - 74mm
- Type : 4-TAPER (JIS)
- B.B. : CBBAL-113 (with BB)
- Compatibility : SHIMANO 10 Speed
- Chain Line : 45mm
- Crank Material : Forged aluminum alloy
- Crank Length : 165 / 170 / 175mm
- Color : Silver
- Combinations : 48-36-26T
46-36-26T

48-36-26T
46-36-26T

Triple model for long distance ride, such as touring, brevet, makes your ride more comfortable and more fun.



ACCESSORY



*See page 10.

XD3BX



XD3BX - 701D

- P.C.D. : 110mm
- Type : 4-TAPER (JIS)
- B.B. : CBBF-110 (with BB)
- Compatibility : SHIMANO 10 Speed / 9 Speed
- Chain Line : 43.5mm
- Crank Material : Forged aluminum alloy
- Crank Length : 160 / 165 / 167.5 / 170 / 172.5 / 175mm
- Color : Silver / Black
- Combinations : 50-36T / 50-34T
48-36T / 48-34T
46-36T / 46-34T



ACCESSORY



*See page 10.

4-TAPER series



CBBAL

- Axle Type : 4-TAPER (JIS)
- Axle : 103 / 110 / 113 / 116 / 119mm
- Cup Thread : BC1.37 x 24T
- B.B. Width : 68mm
- Cup Material : Aluminum alloy

*Italian is available.
110mm spindle only, cup thread M36x24T, shell width 70mm



CBBF

- Axle Type : 4-TAPER (JIS)
- Axle : 103 / 110 / 113 / 119mm
- Cup Thread : BC1.37 x 24T
- B.B. Width : 68mm
- Cup Material : Steel

TL-CBB

Installation and removal Tool for cartridge BB. (CBBAL / CBBF)



Extractor #202 / #203B

Square taper crank removal tool.



ROAD CHAINRING

SMALL PARTS

11 Speed / 10 Speed (SHIMANO compatible)

11 SPEED

10 SPEED

Model	ZEN STRADA	EV130S	EV110S	CP110S / CP74S
Image				
Type	for Double	for Double	for Double	for Double (Compact Plus+)
P.C.D.	130mm	130mm	110mm	110mm / 74mm
Outer	53 / 54 / 55T	46T (56T Black)	46 / 48 / 50 / 52T	44 / 46 / 48T
Inner	39 / 42T	38 / 39T (42 / 44T Black)	34 / 36T	30 / 32T
Color	●Black	●Black, ○Polish	●Black, ○Polish	●Black, ○Polish



The chainring is precision CNC (Computer Numerical Control) machined. Both front and back sides are precisely machined. The high rigid shifting pins ensure excellent shifting performance. Weight reduction is also achieved by providing recesses without impairing rigidity and strength.



10 Speed / 9 Speed (SHIMANO compatible)

10 SPEED

9 SPEED

Model	POE110S (D) set	POE110S (T) set				
Image						
Type	for Double	for Triple				
P.C.D.	110 - 110mm	110 - 110 - 74mm				
Gear	<table border="1"> <tr> <th>Combination</th> <td>50-36T / 50-34T 48-36T / 48-34T 46-36T / 46-34T</td> </tr> </table>	Combination	50-36T / 50-34T 48-36T / 48-34T 46-36T / 46-34T	<table border="1"> <tr> <th>Combination</th> <td>48 - 36 - 26T 46 - 36 - 26T</td> </tr> </table>	Combination	48 - 36 - 26T 46 - 36 - 26T
Combination	50-36T / 50-34T 48-36T / 48-34T 46-36T / 46-34T					
Combination	48 - 36 - 26T 46 - 36 - 26T					
Color	○Silver, ●Black	○Silver				

Front Derailleur Position for installing Chainwheel

Before installation, please measure the A and B dimensions as shown in the illustration and check them to make sure that they meet dimensional requirements in the table below.

A dimension (from center of BB to front end of FD)	Teeth number of outer chainring							
	56T	54T	53T	52T	50T	48T	46T	44T
B dimension (from chain stay to rear end of FD)	117 mm	113 mm	111 mm	109 mm	105 mm	101 mm	97 mm	93 mm
	2mm or more							

If you have questions regarding installation and handling, please contact a professional. Incorrect installation and setting may damage the parts and lead to serious accidents.

8 Speed / 7 Speed

8 SPEED

7 SPEED

Model	130J	110J	74J	110J & 74J set
Image				
Type	for Double	for Double / Triple	for Triple	for Triple
P.C.D.	130mm	110mm	74mm	110 - 110 - 74mm
Outer	46 / 48 / 50 / 52 / 53 / 54 / 56T	46 / 48 / 50 / 52 / 53 / 54T	—	48 - 38 - 28T 48 - 36 - 26T 48 - 36 - 24T
Center	—	34 / 36 / 38 / 40 / 42 / 44T (*Double inner / Triple center)	—	—
Inner	38 / 39 / 40 / 42 / 44T	24 / 26 / 28 / 30 / 32T	—	—
Color	○Silver	○Silver	○Silver	○Silver

CHAINRING FIXING BOLTS & NUTS

Model	Material	Color	Bolt	Nut	Applicable Model
#801	Aluminum alloy	<ul style="list-style-type: none"> ○Silver ●Black ●Blue ●Red ●Gold ●Pink ●Green 	Torx 30	Hexagon 6	OX series
#803	Aluminum alloy	<ul style="list-style-type: none"> ○Silver ●Black ●Blue ●Red ●Gold ●Pink ●Green 	Torx 30	Normal Nut	OX series CXC2-901D
#703	Aluminum alloy	<ul style="list-style-type: none"> ○Silver ●Black ●Blue ●Red ●Gold ●Pink ●Green 	Torx 30	Hexagon 6	EXP series Mighty series XD3BX-701D ALPINA2 Triple
#403	Steel	<ul style="list-style-type: none"> ○CP ●BCP ○CP 	Hexagon 5	Normal Nut	ALPINA2 Triple
#403 Inner Bolt set					ALPINA2 Triple

Aluminum alloy

The high-strength aluminum alloy torx bolt is much more durable compared with a standard alloy bolt. It is lightweight, strong and beautifully colored.



#801 for OX Compact

For OX series Compact (PCD110mm) w/3.4mm spacers



#803 for OX Compact Plus+

For OX series Compact Plus+ (PCD110mm - 74mm), For CXC2-901D



CHAINRING SPACER

Model	Contents	Put spacers in between outer ring and inner ring to adjust spacing between the rings.
Chainring Spacer set 15 x 10 x 0.5	Φ15 × Φ10mm t0.5mm 5 pieces set	
Chainring Spacer set 15 x 10 x 3.4	Φ15 × Φ10mm t3.4mm 5 pieces set	

#703 for Double



#403 for Double



#403 for Triple Inner



CRANK SPACER

Model	Contents	Put spacers in between crank and bearing to adjust spacing.
2 piece Crank Adjust Spacer set	Φ29 × Φ24mm t0.5mm 3 pieces set	
	Φ29 × Φ24mm t3.4mm 3 pieces set	

PRESSURE BOLT

Model	Contents	Adjustable Bolt (M18)
M15 Pressure Bolt		*For New IDS24 AXLE (OX2, CXC2)

BB AXLE BOLTS

Model	Tool	Material	Reference
KPB	Hexagon 8		
14BK	Box 14	Cr-Mo Steel	M8 x 1.0
15CP	Box 15		



CRANK DUST CAP

Model	Tool	Material
CNS Alloy Dust Cap (with 14 bolt)	Hexagon 5	Aluminum alloy

The ultra-lightweight alloy cap and axle bolt set for square taper crank. The wide range of colors allows you to choose the most suitable one for your bike.



SEATPOST CLAMP BOLT

Model	Size	Tool	Material
Seatpost Clamp Bolt	17mm 19mm 22mm 25mm	Hexagon 5	Cr-Mo Steel (CP finish)

