



# RIDEA

BOOST YOUR RIDING IDEA

## ROAD

CRYSTAL Frame

PRISM wing wheels

CRANKSETS

IIPW Pulley

BOTTOM BRACKET





RIDEA



TAIPEI CYCLE  
d&i awards 2024



# PRISM Wing Wheel



700C X359

700C X339

D451

D406

D349

# Prism Wing Wheelset



**"Crystal wings, soaring in the wind."**

Dividing the spoke structure into two sides, forming the optimal triangular configuration with the wheel rim, reducing over 60% of the spoke's wind exposure.

**"Ride freely, conquer headwinds."**

The hollow Y-wing bone with a patented design arranges the center's left and right crosses in a radiating pattern, resembling the cross-spoke pattern of traditional spoke wheels. This design improvement enhances the rigidity of the traditional blade wheel and adds resilience during cycling, resulting in a perfect display of star-shaped rays and diamond crystal shapes. As the shape of the prismatic crystal resembles the feathers of a wing that cuts through the air like a blade. Hence, it is named the "Prism Wing" Wheel.

## Force Diagram Of PRISM Wheelset

Model: **X339** W29 H50

- Flow of Forces: Structural Aesthetics
- Through pressure-resistant structural aesthetics, impact forces are broken down and dispersed to zero.

**1** Primary force lines 

**2** Elastic equilibrium lines 



**Ground contact point**



## Carbon material

Japanese Toray T1100 Ultra  
High-modulus Carbon Fiber



Carbon  
12K



Carbon  
Forged



PRISM Wheelset

700C / DISC

Carbon material:  
Japanese Toray T1100 Ultra  
High-Modulus Carbon Fiber



X339

W29 H35

Rim

Carbon

Weight

1260g

Color

CF

CT

**WSX339 C**

Ceramic Ball



**WSX339 S**

Steel Ball



PRISM Wheelset

700C / DISC

Carbon material:  
Japanese Toray T1100 Ultra  
High-Modulus Carbon Fiber



**X359** W29 H50

Rim Carbon

Weight 1460g

Color **CF** **CT**

**WSX359 C**  
Ceramic Ball



**WSX359 S**  
Steel Ball



DESIGN  
AWARD  
2025



PRISM Wheelset

700C / DISC

Carbon material:  
Japanese Toray T1100 Ultra  
High-Modulus Carbon Fiber



**X359** W29 H50

Rim Carbon

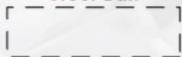
Weight 1310 g

Labeling color  1  4

**WSX359 C**  
Ceramic Ball



**WSX359 S**  
Steel Ball



# Road Bike Frame

X  
CRYSTAL

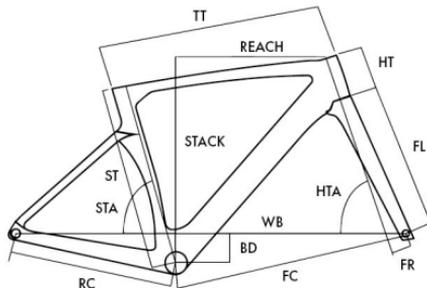
RIDEA-001  
UCI  
FRAMESET • 45218



with IHV



with IHA



**Material :** Japanese Torayca HM carbon fiber T800 /T1000

**Size :** XS/S/M/L/XL

**Headset :** top O.D/52mm , down O.D/52mm

**Brake :** Flat Mount Disc

**Tire clearance :** max. 32\*700C

**BB :** T47\* 1.0mm, BB shell : 86.5mm

**Cabling :** Full internal cable routing

**Weight**

**Frame :** 860g ~ 890g (size S)

**Fork :** 350g ~ 380g

**Seat post :** 350mm / 180g

**Integrated bar :** 400 / 100 --- 315g

unit:mm

SIZES	ST	TT	HT	HTA	STA	BD	FL	FR	FC	RC	WB	STACK	REACH	BAR
XS	445	500	100	71	74.5	70	370	48	565	408	960	500	361	361/100
S	460	520	108	71.5	74	70	370	48	577	408	974	510	375	400/100
M	490	535	125	73	73.5	70	370	48	580	408	978	528	380	400/120
L	515	550	145	73	73.5	70	370	48	582	408	980	548	385	400/120
XL	535	560	165	73	73.5	70	370	48	592	408	990	567	391	400/120

# Road Bike Frame

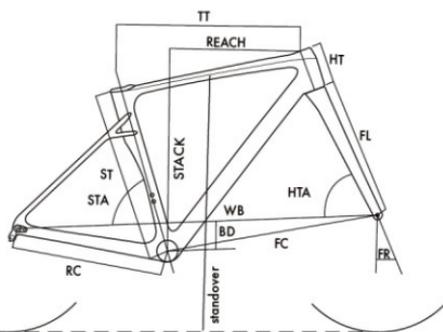
X  
CRYSTAL



with IHV



with IHA



**Material :** Japanese Torayca HM carbon fiber T800 /T1000

**Size :** XS / S / M / L / XL

**Headset :** top O.D/52mm , down O.D/52mm

**Brake :** Flat Mount Disc

**Tire clearance :** max. 32\*700C

**BB :** T47\*1.0mm , BB shell : 86.5mm

**Cabling :** Full internal cable routing

## Weight

**Frame :** 780g ~ 820g (size S)

**Fork :** 320g ~ 340g

**Seat post :** 350mm / 180g

**Integrated bar :** 400 / 100 --- 320g

unit:mm

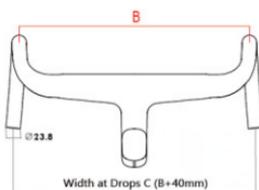
SIZES	ST	TT	HT	HTA	STA	BD	FL	FR	FC	RC	WB	STACK	REACH	STANDOVER	BAR
XS/49	445	508	109	71.75	75.5	74	370	47	574	410	973	514	375	734	360/90
S/51	456	531	120	72.5	74	74	370	47	577	410	975	527	380	745	380/100
M/53	473	540	137	73	74	72	370	47	583	410	978	544	384	767	400/100
L/55	494	562	157	73.5	73.5	72	370	47	596	410	991	565	395	785	400/110
XL/57	515	577	184	73.5	73.5	72	370	47	610	410	1005	591	402	807	420/120

# Integrated AeroSynth ErgoFlow

X  
CRYSTAL



- ◆ Toray T800 / T1000 High-Modulus Carbon Fiber — The Pinnacle of Strength
- ◆ Ingenious Ergonomic Design — Perfect Comfort and Control
- ◆ Designed for Asian Riders — Shorter Reach and Drop
- ◆ Outstanding Compatibility — OD1 and OD2 Adapters for Most Frames
- ◆ Weight 328g (100/400)



**A:** 80 / 90 / 100  
/ 110 / 120

**B:** 360 / 380  
/ 400 / 420



- ◆ OD1  $\varnothing 28.6$  and OD2  $\varnothing 31.8$  compatible
- ◆ Aerodynamic design, purpose-built for speed.
- ◆ Optimal geometry and ergonomically designed for the best grip.

## Match RCH1



IHA-1

## Match RCH2



IHA-2

Compatible with head tube adapters for different bike models from various brands.

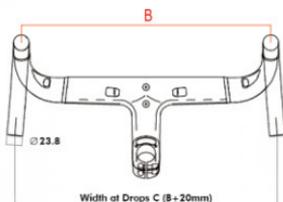
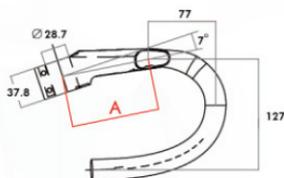


# Integrated Versa Handle

X  
CRYSTAL



- ◆ Made by premium T800 /T1000 carbon fiber, ensuring strength and stability.
- ◆ 7 types of stem lengths X 5 types of handle widths.
- ◆ The most comprehensive range of accessories, no brand in the industry can offer them.
- ◆ Support for the latest Internal cable routing or old-style external cable routing.
- ◆ The pricing is most affordable, nearly 50% lower than the other comparable brands.
- ◆ Weight 320g



A: 80 / 90 / 100 / 110  
/ 120 / 130 / 140

B: 360 / 380 / 400  
/ 420 / 440



## Product contents:

integrated handle x1, all accessories below (as shown)

- ◆ TOP CAP outer diameter x 3
  - 56mm
  - 52mm
  - 47mm
- ◆ Spacers (ring) x 6
  - 10mmx4 · 5mmx2
  - Max 50mm

## RCH1



IHV-1

## RCH2



IHV-2

## Road Computer Holder

### RCH1

**Material** Carbon

**Weight** 12 g



### RCH2

**Material** Carbon

**Weight** 32 g



## Road Bike Fork

### RBF1

**Material** Carbon

**Weight** 375 g



# BOTTLE CAGE

Lightweight 13g



## BOTTLE CAGE PWBC

**Diameter max** Ø75mm

**Weight** 13 g

**Colors**



# SADDLE

full carbon



## SADDLE CS 152FS

Width 152 cm

Length 238 cm

Wight 135 g

Material Carbon + EVA  
+ Micro fiber

Colors **1** **2** **3** **P** **L2**



Round Rails  
7x7mm



## SADDLE CS 152F

Width 152 cm

Length 238 cm

Wight 128 g

Material Carbon + EVA  
+ Micro fiber

Colors **1** **2** **3** **P** **L2**



Oval Rails  
7x9mm



## SADDLE CS 152F

Width 152 cm

Length 238 cm

Wight 128 g

Material Carbon + EVA  
+ Micro fiber

Colors **1** **2** **3** **P** **L2**



  
Oval Rails  
7x10mm



## SADDLE CS 142F

Width 142 cm

Length 238 cm

Wight 118 g

Material Carbon + EVA  
+ Micro fiber



  
Oval Rails  
7x10mm

## SADDLE CS 141C

Width 141 cm

Length 238 cm

Wight 88 g

Material Full carbon



  
Oval Rails  
7x10mm

## Thru-axles



Model	Axle length 1,2,3 (mm)	Axle diameter (mm)	Metric screw thread
#BTA111	115-121	12	M12-1 x 15
#BTA112	123-129	12	M12-1 x 15
#BTA116	163-169	12	M12-1 x 15
#BTA117	171-177	12	M12-1 x 15
#BTA202	120-126	12	M12-1.5 x 15
#BTA204	146-152	12	M12-1.5 x 15
#BTA205	154-160	12	M12-1.5 x 15
#BTA206	162-168	12	M12-1.5 x 15
#BTA207	172-178	12	M12-1.5 x 15
#BTA311	119-125	12	M12-1.75 x 20
#BTA316	163-169	12	M12-1.75 x 20
#BTA308	174-180	12	M12-1.75 x 20
#BTA309	192-198	12	M12-1.75 x 20
#BTA414	143-147	15	M14-1.5 x 15
#BTA415	153-157	15	M14-1.5 x 15
#BTA512	123-127	15	M15-1.5 x 15
#BTA504	146-150	15	M15-1.5 x 15
#BTA505	156-160	15	M15-1.5 x 15

1: The axle length can be adjusted with spacers in 2mm increments within the specified range.

2: Choose the spacer that provides the closest length to the original axle length.

3: Compatible with original axles up to 1 mm longer or shorter than the given range.

Example #BTA206 (162-168) is compatible with axle lengths from 161 to 169 mm.

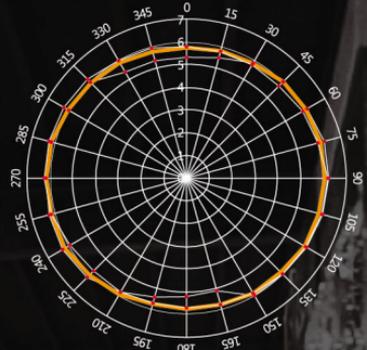


# CRANKSETS

# CHAINRING TECH

We have been making chainrings and pulley wheels since our very beginning.

We have learned one or two things about it and, as a result, we have developed a set of technologies to complement the manufacturing process we use.



## POWERING DUO-OVAL CHAINRING

The exclusive Duo-Oval profile of Ridea Powering chainrings offers a smooth transition between peak and valley zones in the chainring to offer a smooth pedaling stroke and a faster adaptation for new comers into the oval chainring world. Duo-Oval shape is available in W2T and W3T levels, as well as a W0T for those who prefer a perfectly round chainring.



## X - ODON

Narrow-Wide teeth design is available for 1x chainrings and pulley wheels.

## LAMIFLOW

Aerodynamism, lightness and stiffness in one chainring.

## TI-CAST

Hardener titanium coating available for chainrings and pulleys for even more kilometers of riding, in style.



## ROAD CRANKSET

### PNEUMA PN R492

**BCD** 110 mm 4 arms

**Spindle** Ø24 mm/ Ø29 mm

**Chain line** 44,5 mm

**Weight\*** 454 g

**Chainrings** R492 (1x & 2x)

**Titanium**

**Steel**



**Exhibit**



**Crank length**

140 / 145 / 150 / 155 /  
160 / 165 / 167.5 / 170 /  
172.5 / 175 / 180



**ES 3D**

**ES R492**

**BCD** 110 mm 4 arms

**Spindle** Ø24 mm

**Chain line** 44 mm

**Weight\*** 498 g

**Chainrings** R492 (1x & 2x)

**Titanium**



**Steel**



**Exhibit**



**Crank length**

145 / 150 / 155 /  
160 / 165 / 167.5 / 170 /  
172.5 / 175 / 177.5 / 180



# ROAD CHAINRINGS

## 2X LF R492

**BCD** 110 mm 4 arms

**Compatibility** Pneuma cranks ES cranks  
R491 spiders. Shimano

**WD<sub>T</sub>**

Round chainring



50T/34T; 54T/39T;  
52T/36T; 56T/44T

**W2<sub>T</sub>**

Level 2 duo-oval



48T/32T; 50T/34T;  
52T/36T; 53T/39T

**W3<sub>T</sub>**

Level 3 duo-oval



50T/34T; 53T/39T  
52T/36T;



**WD<sub>T</sub>**



**W2<sub>T</sub> W3<sub>T</sub>**



## 1X LF R492

**BCD** 110 mm 4 arms

**Compatibility** Pneuma cranks ES cranks  
R491 spiders. Shimano

**WD<sub>T</sub>**

Round chainring



38T; 40T; 42T;  
44T; 46T; 48T;  
50T; 52T; 54T;  
56T

**W2<sub>T</sub>**

Level 2 duo-oval



34T; 36T; 38T;  
40T; 42T; 44T

**W3<sub>T</sub>**

Level 3 duo-oval



46T; 48T; 50T;  
52T; 54T; 56T



**WD<sub>T</sub>** 38T-52T



**WD<sub>T</sub>** 54T-56T



**W2<sub>T</sub>** 34T-44T



**W3<sub>T</sub>** 46T-52T



**W3<sub>T</sub>** 54T-56T





## GRAVEL Crankset

\*170 mm crank arm; 24 mm, T164 spindle; without chainring

**PNEUMA PN GR4C**

**BCD** 110/80 mm 4 arms

**Spindle** Ø24 mm/ Ø29 mm

**Chain line** 44,5 mm

**Weight\*** 460 g

**Chainrings** GR4C (1x & 2x)

**Exhibit**



**Crank length**

140 / 145 / 150 / 155 /  
160 / 165 / 167.5 / 170 /  
172.5 / 175 / 180

**Titanium**



**Steel**



# GRAVEL Chainrings

## 2X LF GR4C

**BCD** 110/80 mm 4 arms

**Compatibility** Pneuma cranks with GR4C Shimano GRX spiders.

**WD+**

Round chainring

0T



46T/30T

**W2+**

Level 2 duo-oval

-2T



46T/30T

**WD+**



**W2+**



## 1X LF GR4C

**BCD** 110 mm 4 arms

**Compatibility** Pneuma cranks with GR4C Shimano GRX spiders.

**WD+**

Round chainring

0T



38T; 40T; 42T

**W2+**

Level 2 duo-oval

-2T



38T; 40T; 42T

**WD+**



**W2+**





## MTB Crankset

\*170 mm crank arm; 24 mm, T164 spindle; without chainring

**PNEUMA PN MSH1**

**BCD** 96 mm 4 arms

**Spindle** Ø24 mm / Ø29 mm

**Chain line** 52mm/55mm/56,5mm

**Weight\*** 452 g

**Chainrings** Powering MSH1 (1x)

**Titanium**

**Steel**

**Exhibit**



**Crank length**

160 / 165 / 170 /  
175 / 177.5

# MTB Chainrings

## 1X LS MSH1

BCD 96 mm 4 arms

- Compatibility**
1. Pneuma cranks with MSH1 spiders.
  2. Shimano

**WDR**  
Round chainring  
-0T



32T; 34T; 36T

**W2r**  
Level 2 duo-oval  
-2T



30T; 32T; 34T;  
36T; 38T; 40T

**WDR**



**W2r**



## 1X LS M4S1

BCD 104 mm 4 arms

**WDR**  
Round chainring  
-0T



32T; 34T; 36T;  
38T

**W2r**  
Level 2 duo-oval  
-2T



34T; 36T; 38T;  
40T; 44T; 48T

**WDR**



**W2r**



## 1X LS MSD1

Compatibility Shimano

WD+

Round chaining



30T; 32T;  
34T; 36T

WE+

Level 2 duo-oval



32T; 34T;  
36T; 38T



Exhibit Shimano



WD+



WE+



## 1X LS MRD1

Compatibility Pneuma cranks

WE+

Level 2 duo-oval



32T; 34T;  
36T; 38T

WE+



Exhibit RIDEA



## CHAINRING BOLT COVER

### TQSH

Compatibility

Shimano

Arm Material

CNC AL 7075

Spider Type

4 arms



Brand

Series

Ridea model

SHIMANO

DURA-ACE

ULTEGRA

105

R92XX

R91XX

R90XX

R81XX

R80XX

R68XX

R71XX

R70XX

R58XX

TQSH 92

TQSH 91

TQSH 90

TQSH 81

TQSH 80

TQSH 68

TQSH 71

TQSH 70

TQSH 58



## FRONT DERAILLEUR SPACERS



FDTDT3



FDTDW4



FDDET3



FDDEW4



FDUET6

## Chain deflector

SCA3

Material CNC alloy

Weight 17 g

Color 1 2 3 4



## CHAINRINGS BOLTS

TQAS-R5

Thread length  
5 mm

No. of chainrings  
1

Male material  
AL7075

Female material  
SUS



TQAS-R8

Thread length  
8 mm

No. of chainrings  
2

Male material  
AL7075

Female material  
SUS





RIDEA

RIDEA VLEO

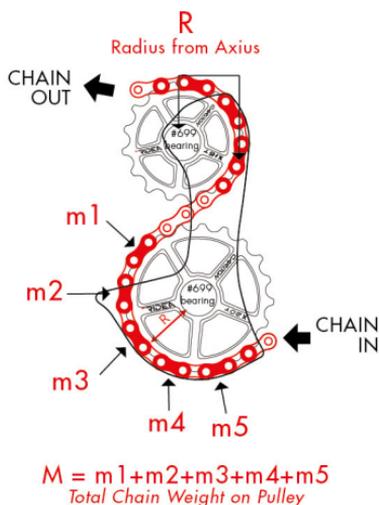
**IIPW Pulley**

## PHYSICS BEHIND PULLEY+

### MASS MOMENT OF INERTIA

The mass moment of inertia "I" is a measure of an object's resistance to change in rotation direction. Its equation ( $I=mr^2$ ) where "M" is the mass (of the chain) and "R" is the radius (of the pulley) shows that with a bigger pulley (i.e. radius) you also get a bigger mass of the chain interacting with the pulley, resulting in a higher mass moment of inertia than with standard size pulleys.

The higher the mass moment of inertia is, the more momentum you can create and keep while pedaling at the same intensity. Therefore, Ridea IEPW helps you save energy to ride faster and longer.



## COMMON MATERIALS IN CYCLING INDUSTRY

	Aluminum alloy	Plastic	Carbon fiber	Ridea's Forged Carbon
Vibration reduction	Poor	Very good	Good	Very good
Hardness	Very hard	Soft	Hard	Hard
Weathering resistance	Poor	Good	Coated surface: good Non-coated surface: poor	Good
Tensile strength	Good	Poor	Good	Good
Elasticity	Very poor	Acceptable	Good	Good
Wearing resistance	Acceptable	Poor	Coated surface: good Non-coated surface: poor	Good
Manufacturing tolerance	Good	Acceptable	Poor	Acceptable
Attainable shapes	Complex	Complex	Simple	Complex
Specific gravity (less is better)	2.7	0.8-1.1	1.4-1.5	1.4-1.5



## Shield of Defender

18T 12T Eccentric Set  
 Prevents chain drop  
 Makes riding safer and more secure

- » **A. Carbon Composite Pulley**  
 50% Forged Carbon Pulley Material, more durable—over 3 times longer-lasting.
- » **B. Full Ceramic Bearings**  
 Not only ceramic balls, but the inner and outer rings are also ceramic, making it easier to maintain and ensuring smoother rotation.
- » **C. Turbulent Flow Dimples**  
 A wind-breaking full plate design combined with 3 patented airflow stabilizing dimples, ensuring stability even in crosswinds.
- » **D. Shield of Defender**  
 Patented chain safety anti-drop design plate to prevent chain drop due to unexpected cycling situations.
- » **E. X-ODON Teeth**  
 RIDEA's professional narrow-wide tooth design has been further refined to provide a more stable chain, ensuring precise transmission when rotating at high speeds.
- » **F. Locking Screw 4N·m**  
 Includes high-torque locking screws for the lower pulley, ensuring the screws can safely tighten the lower pulley.

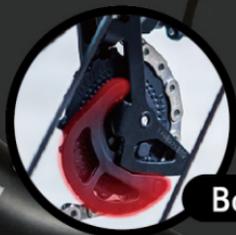
**IEPW-D**

### 18T/12T PULLEY KIT

Brand	Series	Ridea model
SHIMANO	R91xx /R81xx R80xx /R71xx R70xx	#RDED1
	R92xx	#RDED2
SRAM	Red22 /Force22 /Rival22 /Apex11	#RDED1
	AXS (red /Force /Rival) AXS E1 Rival	#RDED3
	AXS E1 (red /Force)	#RDED4

## Shield of Defender

18T 12T Eccentric Set  
Prevents chain drop  
Makes riding safer and more secure



Back

### IEPW-D

Warranty 4 Years

#### Carbon Pulley

Black carbon pulley + The alloy decorative plate is available in various color options.



standard color



customization colors



# PULLEY KIT

## Alloy Pulley



### UPPER 12T



### LOWER 12T



Standard  
Carbon



Type-A  
Alloy



Type-B  
Alloy-PYAX

### LOWER 14T



Standard  
Carbon



Type-A  
Alloy



Type-B  
Alloy-PYAX

## IEPW-K 14T/12T PULLEY KIT

Brand	Series	Ridea model	Teeth
SHIMANO	R91xx / R81xx R80xx / R71xx R70xx	#RDPK1	UPPER 12T LOWER 14T
	R92xx	#RDPK2	
	R90xx / R80xx / R70xx (Short cage)	#RDPK4	UPPER 12T LOWER 12T
SRAM	Apex11	#RDPK1	UPPER 12T LOWER 14T
	AXS (red /Force /Rival) AXS E1 (red /Force /Rival)	#RDPK3	
	Red22 /Force22 /Rival22	#RDPK4	UPPER 12T LOWER 12T

# Bearings

**CC** Ceramic Ball-Ceramic Race  
Bearings Warranty - **4 Years**

Ceramic Ball  
ZrO<sub>2</sub>;Si<sub>2</sub>N<sub>4</sub> Ball

Retainer  
Peek Resin Cage

Ceramic Rings  
ZrO<sub>2</sub> Outer & Inner



**C** Ceramic Ball-Stainless Steel Race  
Bearings Warranty - **2 Years**

Ceramic Ball  
ZrO<sub>2</sub>;Si<sub>2</sub>N<sub>4</sub> Ball

Retainer  
Nylon Cage

Stainless Steel Rings  
Steel Outer & Inner



Shield  
Nylon

**S** Steel Ball-Steel Race  
Bearings Warranty - **1 Years**

Steel Ball

Steel Rings  
Steel Outer & Inner



Shield  
Nylon

UPPER PULLEY 12T  
LOWER PULLEY 12T



UPPER PULLEY 12T  
LOWER PULLEY 14T



# WB20 Wind Breaker

The RIDEA "Inertia Extreme Pulley Wheel (IEPW) — Wind Breaker 20 (WB20)" represents the latest product that integrates RIDEA's 16 years of professional pulley design and optimization experience, aiming to significantly enhance riders' cycling experience.

## Key Features of the WB20:

- 1. Forged Carbon Fiber Integrated Shell:**  
*Crafted from lightweight and durable carbon fiber material, the shell effectively protects the pulley for smooth operation, ensuring the accuracy of electronic shifting, and reducing performance impacts caused by shaking. Additionally, the fully enclosed design prevents dust and debris from entering, thereby extending the lifespan.*
- 2. Dynamic Airflow Aerodynamics:**  
*The concave point design of the shell substantially reduces air friction, lowers drag, thereby enhancing speed and stability during cycling, improving overall riding experience smoothness.*
- 3. Airfoil Blade Design:**  
*The airfoil blade at the front of the shell effectively guides airflow, reducing turbulence and wind noise, making the riding process quieter and more comfortable.*
- 4. Optimal Pulley Configuration:**  
*With a 12T upper pulley and a 20T lower pulley, supporting all industry-standard shifting systems, providing a fast, stable, and precise riding experience, meeting the demands for optimal inertia. The pulley material can be chosen from carbon fiber or aluminum alloy to cater to different color customization needs. Supports 1x/2x drivetrain configurations (11-12-speed compatible).*
- 5. Richly Colored Front Decorative Plate:**  
*Utilizing premium aluminum alloy CNC work and advanced anodization treatment, offering a variety of color choices, allowing users to freely showcase their personal style.*



## WB20

Brand		Series	Ridea model
SHIMANO	DURA-ACE Di2	R91XX/R92XX	RD6 WB20
	ULTEGRA Di2	R80XX/R81XX	
	DURA-ACE Non-Di2	R9000/R9100	RD6b WB20
ULTEGRA Non-Di2	R7900/R8000		
	105 (Di2/Non-Di2)	R70XX/R71XX	RD7 WB20
SRAM	RED FORCE RIVAL	AXS	RD9 WB20

RIDEA's "Wind Breaker 20" offers a top-tier user experience to every rider, helping them transcend cycling limitations, overcoming air resistance by boosting speed and stability.

## WB 20B

Warranty 4 Years

### Carbon Pulley

Black carbon pulley + The alloy decorative plate is available in various color options.



standard color



customization colors



## WB 20F

Warranty 4 Years

### Carbon Pulley

Black carbon pulley + The alloy decorative plate is available in various color options.



standard color



customization colors



## WB 20A

Warranty 4 Years

### Alloy Pulley

20T Alloy pulley same decorative plate is available in a choice of colors.



standard color



customization colors



# VL20 Versa-Lightweight

## [Extreme Inertia Oversized Pulley Wheel System | Redefining the Benchmark for Bicycle Drivetrain Efficiency]

After 17 years of dedicated pulley R&D, RIDEA engineers present the groundbreaking VL20 (Versatile and Lightweight) pulley system. By integrating aerospace-grade composite materials with aerodynamic fluid dynamics, this innovation achieves dual breakthroughs in enhanced drivetrain efficiency and reduced system weight, setting new standards for road bike transmission systems.

### Six Core Technologies Decoded :

- 1. Aerospace-Forged Carbon Fiber Monocoque Structure:**
  - Full carbon fiber monocoque construction (Weight: 78g±2)
  - 70% improvement in lateral stiffness
  - Closed-front edge protective design
  - Precision bearing positioning system
- 2. Dynamic Chainwrap Envelopment Technology :**
  - 3D curved chain guide track ( $\pm 2^\circ$  swing tolerance)
  - Dual-layer chain retention (SRAM/Shimano system compatible)
- 3. Aerodynamic Optimization System :**
  - Leading-edge airfoil design directs airflow while enhancing structural rigidity, ensuring quieter and safer riding
- 4. Modular Drivetrain Configuration :**
  - Upper pulley: 12T high-inertia carbon fiber wheel
  - Lower pulley: 20T oversized design
  - Supports 1x/2x drivetrain configurations (11-12-speed compatible)
- 5. Race-Oriented Lightweight Engineering :**
  - Topology-optimized structure (stress distribution simulation analysis)
  - Aerospace-grade fasteners
  - Dynamic mass balance weighting
- 6. Custom Visual System :**
  - 6-series aerospace aluminum front panel (5-axis CNC machined)
  - Tri-stage anodization process (customizable multi-color options)



### VL 20

Brand	Series	Ridea model	
SHIMANO	DURA-ACE Di2 ULTEGRA Di2	R91XX/R92XX R80XX/R81XX	RD6 VL20
	DURA-ACE Non-Di2 ULTEGRA Non-Di2	R9000/R9100 R7900/R8000	RD6b VL20
	105 (Di2/Non-Di2)	R70XX/R71XX	RD7 VL20
SRAM	RED FORCE RIVAL	AXS	RD9 VL20

"This isn't just a pulley upgrade – it's a revolution in drivetrain systems"

- Daniel Chen, RIDEA Chief Engineer

## VL 20B

Warranty 4 Years

### Carbon Pulley

Black carbon pulley + The alloy decorative plate is available in various color options.



standard color



customization colors



## VL 20F

Warranty 4 Years

### Carbon Pulley

Black carbon pulley + The alloy decorative plate is available in various color options.



standard color



customization colors



## VL 20A

Warranty 4 Years

### Alloy Pulley

20T Alloy pulley same decorative plate is available in a choice of colors.



standard color



customization colors



**\*\*Unleash your drivetrain's full potential today\*\***

( Note: Technical specifications and terminology have been professionally adapted for international cycling enthusiasts while maintaining original product features. Measurement units preserved in metric system for global consistency.)

## OTHER ACCESSORIES

### REAR DERAILLEUR BRACKET AXLE EXTENDER

Increases clearance between upper pulley and the bigger cogs. Recommendable with some gears and frame combinations

#### RDHL20

**Material**  
CNC Alloy

**Extension (mm)**  
20/23/27/31

**Compatibility**  
OSPW+ RD1/2/3/4/5/8/9  
(all versions)



#### RDHL22

**Material**  
CNC Alloy

**Extension (mm)**  
22

**Compatibility**  
OSPW+ RD1/2/3/4/5/8/9  
(all versions)



#### RDHL28

**Material**  
CNC Alloy

**Extension (mm)**  
28

**Compatibility**  
OSPW+ RD6/7 MD1/2/6  
CD1/2 (all versions)





# BOTTOM BRACKET

## **6CBB Gecko Grip winner of a TAIPEI CYCLE d&i award 2020**

Ridea 6CBB Gecko Grip bottom brackets were awarded by the jury of the TAIPEI CYCLE d&i awards 2020 for solving issues with Press-Fit BBs, allowing an installation similar to threaded BBs using regular tools in a lightweight and weather resistant design.

## **The First And Only Forged Carbon BB**

Ridea bottom brackets represent the summit of our best technology developments. Gecko Grip (for press-fit systems only) have been awarded by the experts and Forged Carbon material has proven excellent properties in high demanding components like pulley wheels. These two technologies make the 6CBB line the most innovative series of bottom brackets in the market.

# GRIP WITHOUT CREAK

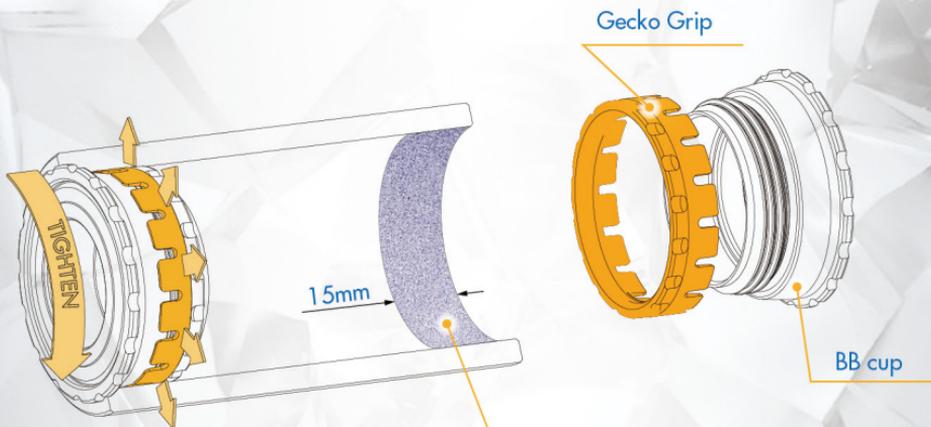
6 CBB  
GECKO GRIP  
Carbon

## THE GECKO GRIP SOLUTION

Gecko Grip technology solves Press-Fit problems thanks to a clever cup design. The Gecko Grip ring threads itself into the BB cup, while expanding towards the frame's bottom bracket shell in the process. The ring evenly pressures against the frame's BB shell, adapting to it no matter how well, or bad, the frame was manufactured. Unlike threaded-fit solutions, Gecko Grip bottom brackets do not add extra weight to your bike setup.

## TAKING CARE OF YOUR FRAME

Gecko Grip bottom bracket installation process is gentler with frame's BB shell area, protecting the carbon fiber of your frame from abrasion and scratches that could potentially reduce the life of your frame.



### INSTALLATION

STEP 1



Wipe off the oil within about 15mm of the frame.

STEP 2



Apply a thin layer of carbon anti-slip agent.

STEP 3



Install the BB in order.

# Bearings

## **CS** Ceramic Ball-Stainless Race

Bearings Warranty - **4 Years**

Size: 6805

Size: 6806

Ceramic Ball  
 $ZrO_2; Si_3N_4$  Ball

Shield  
Blue color

Stainless Race  
Outer & Inner



## **C** Ceramic Ball-Steel Race

Bearings Warranty - **2 Years**

Size: 6805

Size: 6806

Ceramic Ball  
 $ZrO_2; Si_3N_4$  Ball

Shield  
Gray color

Steel Race  
Outer & Inner



## **S** Steel Ball-Steel Race

Bearings Warranty - **1 Years**

Size: 6805

Steel Ball

Shield  
Black color

Steel Race  
Outer & Inner



## Ø30 Compatible With All Cranksets

## Designed for 24, 25, 29, 30 mm cranksets



## BB maintenance

(Every three months or during a bike wash)

- Uninstall the crankset to access the bearings. Remove the spindle sleeve and the rubber shield. Thoroughly clean the bearing area. When dry, apply grease in the area.
- Do not use high-pressure water to avoid water from soaking into the BB shell.
- In case a more in-depth maintenance is required, we recommend this should be done by a skilled mechanic.



## Press Fit for crank axle Ø30

Warranty 4 Years

Ceramic Ball-  
Stainless Race

Warranty 2 Years

Ceramic Ball

**CBB**  
GECKO GRIP  
Carbon

Frame

**BB386 CN 386 30**

Ø46 L68mm  
Ø46 L86.5/91.5mm



Frame

**BB30 CN B30 30**

Ø42 L68/73mm



Frame

**BBRight CN BBR 30**

Ø46 L79mm



Frame

**BB30 CN F30 30**

Ø46 L68mm



Frame

**PF30A CN F30A 30**

Ø46 L73mm



## Press Fit for crank axle Ø24

Warranty 4 Years

Ceramic Ball-  
Stainless Ring

Warranty 2 Years

Ceramic Ball

**CBB**  
GECKO GRIP  
Carbon

Frame

**BB86 CN B86 24**

Ø41 L86.5/91.5mm



Frame

**BB30 CN B30 24**

Ø42 L68mm



### Installation Steps

#### STEP 1

Wipe off the oil within about 15mm of the frame.

#### STEP 2

Apply a thin layer of carbon anti-slip agent.

## Press Fit for crank axle Ø30

1  
Black

Warranty 4 Years

Ceramic Ball-  
Stainless Race

Warranty 2 Years

Ceramic Ball

Alloy

Frame

**BB386 LS 386 30**

Ø46 L86.5/91.5mm



Frame

**PF30 LS F30 30**

Ø46 L68mm



Frame

**PF30 LS F30 B3**

Ø46 L68mm



Frame

**BB30 LS B30 30**

Ø42 L68mm



Warranty 1 Years

Steel Ball

Frame

**BB86 RS B86 30**

Ø41 L86.5/91.5mm



## Press Fit for crank axle Ø24

1  
Black

Warranty 4 Years

Ceramic Ball-  
Stainless Ring

Warranty 2 Years

Ceramic Ball

Alloy

Frame

**BB86 LS B86 24**

Ø41 L86.5/91.5mm



### Installation Steps

STEP 1

Wipe off the oil first.

STEP 2

Apply a thin layer of Grease the bearing area.

## Threaded for crank axle Ø30

Warranty 4 Years

Ceramic Ball-  
Stainless Race

Warranty 2 Years

Ceramic Ball



Frame

T47 CN 47A 30

M47x1 L86.5/91.5mm



Frame

T47 CN 47B 30

M47x1 L68mm



Frame

T47 CN 47C 30

M47x1 L73mm



Frame

T47 CN 47D 30

M47x1 L79mm



## Threaded for crank axle Ø24

Warranty 4 Years

Ceramic Ball-  
Stainless Race

Frame

BSA CN BSA 24

1.37x24 L 68/73mm



Warranty 2 Years

Ceramic Ball



## Installation Steps

## STEP 1

Use a tapping tool to tap the threads of the BB shell.



## STEP 2

Use a facing tool for cleanup the faces of the BB shell.



## STEP 3

Thoroughly clean the threads.



## Threaded for crank axle Ø30

Alloy

Warranty 4 Years

Ceramic Ball-  
Stainless Race

Warranty 2 Years

Ceramic Ball

Frame

**BSA LS BSA 30**

1.37x24 L68/73mm

**1 2**

Black Red



Frame

**ITA LS ITA 30**

M36x24 L70mm

**1**

Black



## Threaded for crank axle Ø24

**1 2 3 4**  
Black Red Gold Silver

Warranty 4 Years

Ceramic Ball-  
Stainless Race

Warranty 2 Years

Ceramic Ball

Alloy

Warranty 2 Years

Ceramic Ball

Warranty 1 Years

Steel Ball

Frame

**BSA LS BSA 24**

1.37x24 L68/73mm



Frame

**BSA RS BSA 24**

1.37x24 L68/73mm



### Installation Steps

#### STEP 1

Use a tapping tool to tap the threads of the BB shell.



#### STEP 2

Use a facing tool for cleanup the faces of the BB shell.



#### STEP 3

Thoroughly clean the threads.

# RIDEA BB Tools

Our components are cleverly designed to require lower torque than other designs. PBB386/86-ER BB tool has been designed to match our torque and material specifications to protect your Ridea components during installation and maintenance services.

Tool Model	Material	Size (Double Sided)	Tighten With	Maximum Torque	Ideal For
PBB ER A	Alloy 7075	16-notch 44 mm OD 16-notch 49 mm OD	10 mm Hex Wrench	50 N.m	Alloy BB Cups Pneuma Cranksets
PBB ER C	Forged Carbon	16-notch 44 mm OD 16-notch 49 mm OD	10 mm Hex Wrench	35 N.m	6CBB Cups Pneuma Cranksets
PBB ER S	Stainless Steel	16-notch 44 mm OD 16-notch 49 mm OD	Hand Turn		Alloy BB Cups



P/N: PBB ER A



P/N: PBB ER C



P/N: PBB ER S



Double sided BB tool compatible with 16 notches 44/49 mm BB cups, including all Ridea bottom brackets. Tighten with a 10 mm hex wrench.

PBB ER S is a double sided 16-notch 44 mm OD cups and 16-notch 49 mm OD cups made of carbon steel. It provides a higher leverage for higher torque applications.

## INSTALLATION STEPS

### Press Fit

CN

- STEP 1** Wipe off the oil within about 15mm of the frame.
- STEP 2** Apply a thin layer of carbon anti-slip agent.

LS

- STEP 1** Wipe off the oil first.
- STEP 2** Apply a thin layer of Grease the bearing area.

### Threaded

- STEP 1** Use a tapping tool to tap the threads of the BB shell.
- STEP 2** Use a facing tool for clean up the faces of the BB shell.
- STEP 3** Thoroughly clean the threads.

# CNC'S STATE OF THE ART

Ridea has long been one of the CNC leaders. Our own CNC machinery and expertise design produce what arguably are the best chainrings available, anywhere. In an effort to bring our CNC machining one step ahead, we have developed the new PNEUMA series of products characterized by extreme CNC machining.

To create the new Pneuma series, we got inspired by someone with millions of years of experience: Mother Nature.

Light and strong pneumatic bones are characteristic of some vertebrate lineages. Besides some metabolic functions, pneumatic bones provide great structural support with light weight (think about how light a bird feels in your hand).

Designed to have the best ratio between strength and weight, PNEUMA

represents the summit of Ridea's CNC technology capabilities.

\*Pneuma means "breath" and "air".

# FORGING THE FUTURE

Forged Carbon is an innovative composite with a combination of properties that outperform common materials used in bicycle components. Unlike traditional carbon fiber, Forged Carbon can be precisely shaped and therefore is not limited to simple tubing shapes.

Ridea has already successfully implemented Forged Carbon in parts that suffer great mechanical stress under use, like pulley wheels and bottom bracket cups, proving the incredible resistance of the material. We are currently testing the application of Forged Carbon composite to many other bicycle parts in search for an industry leadership in Forged Carbon composites.

	Aluminum alloy	Plastic	Carbon fiber	RIDEA's Forged Carbon
Vibration reduction	Poor ❌	Very good ✅	Good	Very good ✅
Hardness	Very hard ✅	Soft ❌	Hard	Hard
Weathering resistance	Poor ❌	Good ✅	Coated surface: good Non-coated surface: poor	Good ✅
Tensile strength	Good ✅	Poor ❌	Good ✅	Good ✅
Elasticity	Very poor ❌	Acceptable	Good ✅	Good ✅
Wearing resistance	Acceptable	Poor ❌	Coated surface: good Non-coated surface: poor	Good ✅
Manufacturing tolerance	Good ✅	Acceptable	Poor ❌	Acceptable
Attainable shapes	Complex ✅	Complex ✅	Simple ❌	Complex ✅
Specific gravity (less is better)	2.7 ❌	0.8-1.1 ✅	1.3-1.4	1.3-1.4



best



worse

# Details make the difference.

**RIDEA**

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**SINCE 2006**

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