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AMOY WHEELS



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1.Company Profile

The Leader in lightweight carbon wheels.



Amoy Wheels began in 2013 in Xiamen, China. We specialize in manufacturing carbon fiber bicycle rims and wheels since then, which has successfully innovated and industrialized the supply of lightweight carbon fiber rims and wheels to the bicycle industry.

More than 20+ experienced engineers in our R&D Department and 250+ effective workers, with the sufficient manufacturing facilities, makes monthly capacity of 25,000 pcs rims possible. With strict high-quality standards on the manufacturing processes and 100% quality test & check to guarantee all the rims and wheels greater than UCI/ISO Test standard.

We have a number of unique patented technology in production, making the carbon rims lighter and more strength far above the industry standard. Besides we put a strong emphasis on research and development, Amoy Wheels keeps innovating. We mostly use Toray carbon fiber, especially T700 and rest of T800, T1000 mixed. Both of T800 and T1000 are too rigid to be used alone.

Xiamen city is leader of carbon fiber rims in China, We are the leader of carbon fiber rims in Xiamen. We have built a strong relationships with some famous bicycle brands over the world as the carbon rims or wheels supplier. Good product can talk, choosing us, choosing the better carbon rims & wheels.

2. Production capability

2013
Found Time

300+
Employees

25000m²
Factory Cover

30000pcs
Monthly

• Quality Control Workshops

Product quality inspection is very important during whole production. We set up four quality control workshops to inspect all the products.



Quality Control-1

After molding process, all the rims should be inspected before CNC machining.



Quality Control-2

After CNC machining process, all the rims should be inspected before sanding process.



Quality Control-3

After details treatment process, all the rims should be inspected before painting process.



Quality Control-4

All the rims will be inspected again and put into foam bag and then be packed into carton box carefully.

• Production Workshops

1. Carbon Prepregs Workshop

We purchase different kinds of carbon fibers from Toray Japan and domestic reliable suppliers. The carbon prepregs are carbon fibers saturated with epoxy resin and weaved to sheets through the weaving machines.



2. Cutting Workshop

According to the production schedule, we need to select the necessary carbon sheets. Carbon fiber sheets are cut into the desired angles of 0° , $\pm 45^\circ$, $\pm 30^\circ$, and $\pm 90^\circ$. The carbon fibers are precisely machine-cut into pieces.



3. Lamination Preparation Workshop

According to the production schedule, we need to select the necessary carbon sheets. Carbon fiber sheets are cut into the desired angles of 0° , $\pm 45^\circ$, $\pm 30^\circ$, and $\pm 90^\circ$. The carbon fibers are precisely machine-cut into pieces.



4.Premold & Layup Workshop

The premold eliminate the risk of fiber moving during layup transfer. We adopt two-in-one molds for manufacturing to make mold more precise. Our layup technicians hand lay the fabric layers from the outer to the inner, constructing the rim body as well as fine details like bead hook and nipple reinforcement. After each overlap, we smooth the prepregs to ensure there are no wrinkles, fiber fractures, or air bubbles. When layups are finished, the two parts of the premold are merge into one mold and prepared for the next process.



5.Molding Workshop

Before sent it to the mold plate, the workers need to check everything is well. Then the complete molds are moved to the molding machines. During the molding process, heat and pressure are accurately controlled and monitored in the composite curing ovens.



6.CNC Machining Workshop

After quality inspection, the rims are moved to CNC machining workshop to drill holes. We use aviation-grade CNC drills with drill bits specifically designed for drilling through advanced composites. All rims are drilled at a proper angle and good condition.



7.Sanding Workshop

After quality inspection,the rims will be transferred to sanding worshop to be sanded.The sanding can make the rim surface more smoothly.



8.Grinding Workshop

After sanding process,all rims are tansferred to grinding worshop to be grinded.we detect any resin residue that has wicked away during curing, as well as burrs around the drilled holes.



9.Details Treatment Workshop

Details determine success or failure.Rim details are amplified during the building process, and we want to offer all users premium experience from building to riding.



10.Painting Workshop

The ultralight carbon rims are paintless but the traditional rims should be sent to the painting workshop for a glossy, matte, or any custom finish.



11.Waterslide Decals Workshop

After painting, some rims required waterslide decals will be sent to here to be processed. Decals have diverse options for logo and more dazzling.



12.Laser Carving Workshop

The rims required the laser carving logo will be sent to here to be carved. We recommend laser carving for logo more. Not only it is brief but also more environmental.

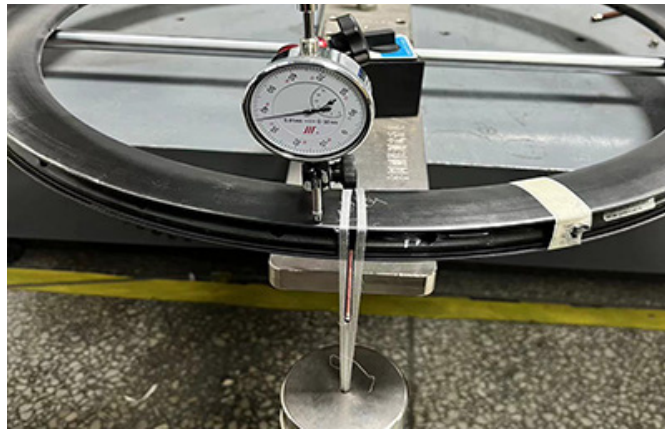


3.Test Standards



UCI Vertical Impact Test

The impact resistance test shows the overall structural performance of the wheels. Impact point includes air nozzle, 45°, 90°, 180°, 270°, 315°. The striker (15.45kg) is dropped from a specific height above. The higher the striker is raised, the greater the impact force is.



Lateral Rigidity Test

The lateral rigidity test measures the stiffness or rigidity of a bicycle rim in the lateral direction, which is perpendicular to the plane of the wheel. This test evaluates the performance and safety of a bicycle wheel, particularly in racing or high-performance applications, where precise handling and stability are critical.



Spoke Hole Tension Test

This test confirms that the key position around the holes has been precisely reinforced during the layup process. The rims are capable of withstanding a spoke force of more than 300kgf when hand built which offers better wheel performance, durability and reliability.



Lateral Vertical Rigidity Test

The test is to predict the behavior of wheels by precisely measuring the lateral vertical rigidity of a raw rim. The test shows how well a rim resists flexing and deforming laterally and vertically. The stiffness of the rim can affect the responsiveness of the bike, the control and stability of the ride, and the transmission of power from the rider to the road.

3.Test Standards



Compression Test

Carbon wheel compression test is conducted to evaluate the ability of carbon wheels to withstand compression and ensure that they are safe and durable for use in cycling. The striker weight 120kg and compress rim for two minutes. The rim deformation < 1 mm, rim keeps intact and no sound vibration.



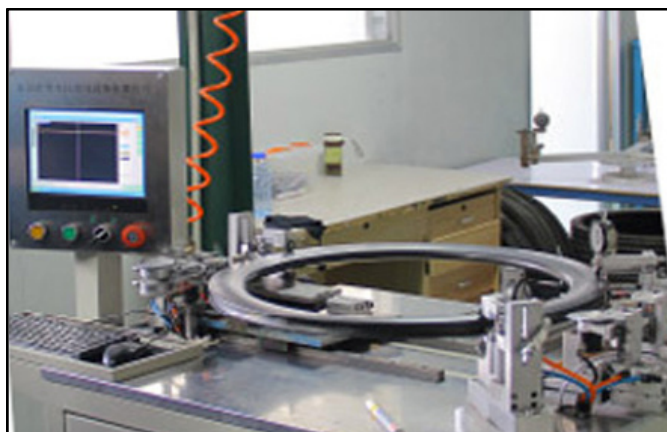
Dynamic Balancing Test

The balance of wheels is very important during riding. Unbalanced wheels would wobble at high speed, which undermines the control ability of the bike. We test the overall dynamic speed balance of our wheels to make it more stable and higher performance during riding.



Tire Pressures Test

We inspect the compatibility of rim and tire, the ease of mounting and disassembly the tire, actual tire width, and brake track deformation due to inflation pressure.



Roundness & Flatness Test

Assuring rims are accurately flat and round out of the molds which means greater stability when assembling the rims into wheels. If the roundness of rim is imprecise, it would affect the spoke hole tension and wobble under higher riding speed.

3.Test Standards



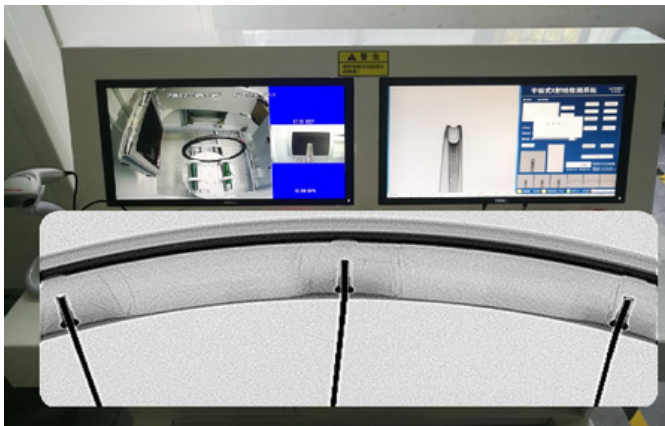
Brake Test

The test evaluates the braking performance and heat tolerance of the rims. The result would be affected by factors such as rim shape, brake track material, and weather conditions. This test can detect the safety and reliability of wheels during riding. Braking temperature and braking distance, were mainly adopted to reflect the qualification.



Wheel Building Test

All the defects of rims can be magnified during wheels building process. If the spoke hole angle is off, wheels would be wobbled. The wheel is predictable and within tight tolerances.



X-ray Test

Through X-ray inspection, we can easily can detect the abnormal layups, impurities, inner wall shape, etc.



Rim Pieces Inspection

We gather all the rims pieces with quality problem tto R&D department. Our researchers would analyse these rim pieces and improve.

4.OEM &ODM Solution

• About Full Custom In Carbon Rim

Customization Options:

- 1.Depth & Width
- 2.Hooked or hookless
- 3.Spoke holes
- 4.Finish,weaves,colors
- 5.Rim weight
- 6.Custom decals
- 7.And more customization

Advantage:

- 1.Your own private molds.
- 2.Full Service For OEM Solution
- 3.limitless customization.
- 4.Innovation will be born.

• Your Own Private Lable For Wheels

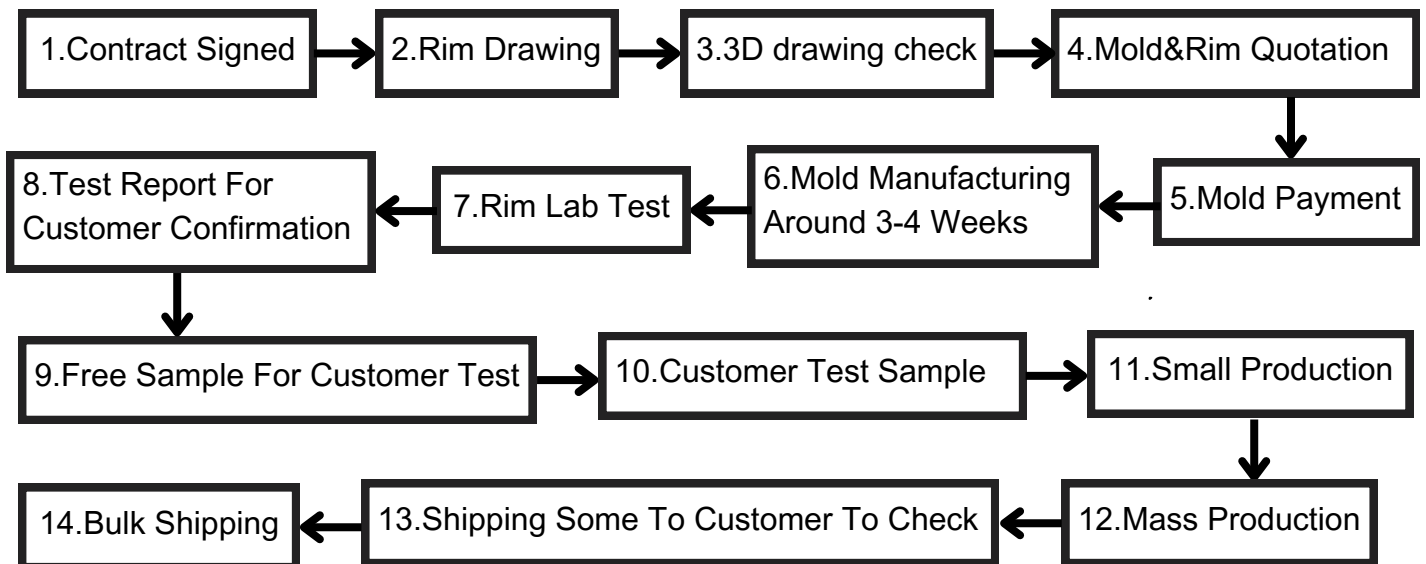
Customization Options:

- 1.Hole count, spacing, drilling angle, offset
- 2.Drain holes
- 3.Internal nipple drilling
- 4.Rim finish (matte, satin, glossy)
- 5.Weight (standard, ultralight)
- 6.Tubular, clincher, tubeless
- 7.Custom Decals

Advantage:

- 1.SMOQ (Small Minimum Order Quantity)
- 2.Full Service For ODM Solution
- 3.Custom options
- 4.No Mold Cost

• Order Process



From start to end.

We make your dream come true.

Give us the specifications,we will finalize the rest.



5.Road/Gravel

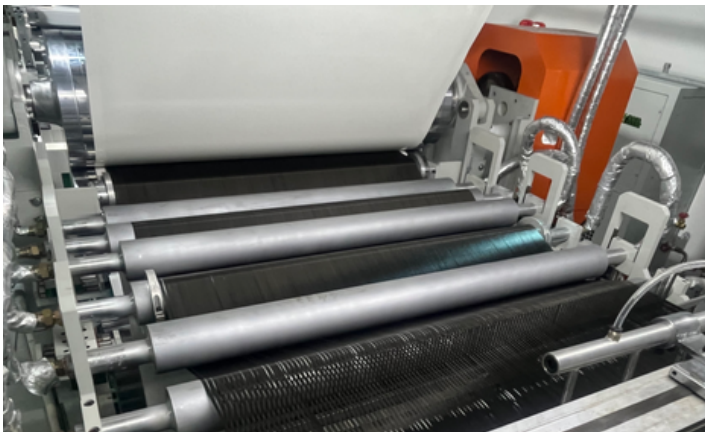
Designed for smooth,gravel,
off-road,cyclocross bikes.



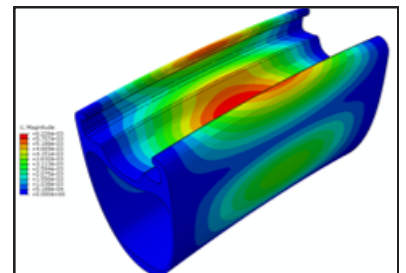
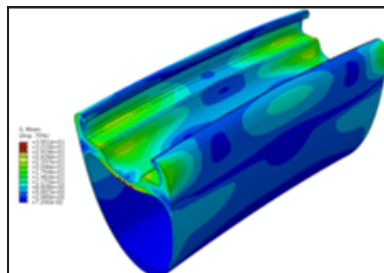
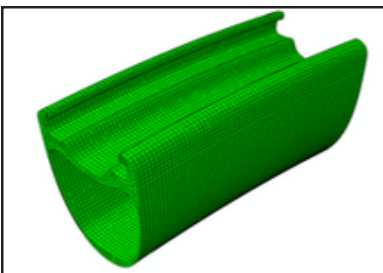
1.Road Technology

- **High-tensile Carbon Fabric & High TG Resin**

Only the high quality carbon fiber sheets and custom proprietary high TG resins are utilized for the production of Amoy Wheels rims.



- **FEA Analysis Application**



Pro/ENGINEER to establish mathematical model, the finite element grid was divided HyperMesh, by ABAQUS finite element analysis for optimum lamination design, make the best product performance.

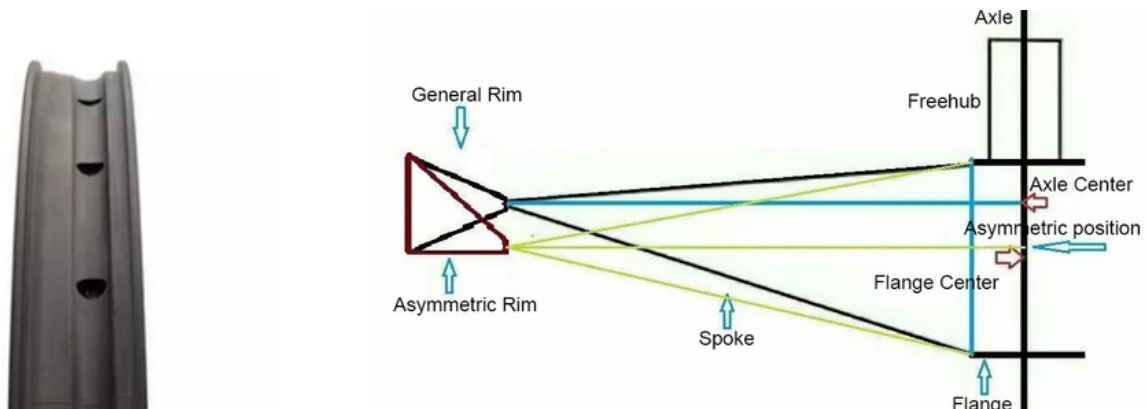
• Paintless Finishing

The new technology for painting is a details treatment process. Rims leave the product line without any painting to cover up imperfections, featuring a raw carbon surface that shows the precision and transparency in our manufacturing process. The rim weight is generally increased by 10-20 grams after painting, the paintless rims take weight saving.



• Asymmetric Rim Profile Design

The spoke holes of the traditional rim are in the center of the wheel, and the asymmetric rim offset is 2.5 mm according to the center point, so that the Angle of the spoke holes on the driving side and the non-driving side of the wheel is closer, and the spoke tension is more average, effectively improving the lateral rigidity of the wheelset. Rider can get a optimum riding feeling.



The purpose of using the asymmetry rim is to correct the offset between the center of the flange and the center of the shaft rod. The spoke hole line is closer to the center of the flange, and the triangle woven together with the spoke and hub can be closer to the isosceles triangle, so that the length of the two sides of the spoke is close to the same, and the spoke tension is close to the same.

• **Aerodynamic Rim Profile Design**

The undulating rims can shorten spoke length and torque making strength transmission more directly. When the windward angle increases, more air passes through the rim, forming a lateral vortex. The undulating shape of the rims allows these vortices to dismount steadily, continuously, and quickly, thereby reducing side pressure and improving riding safety.



2.Product List

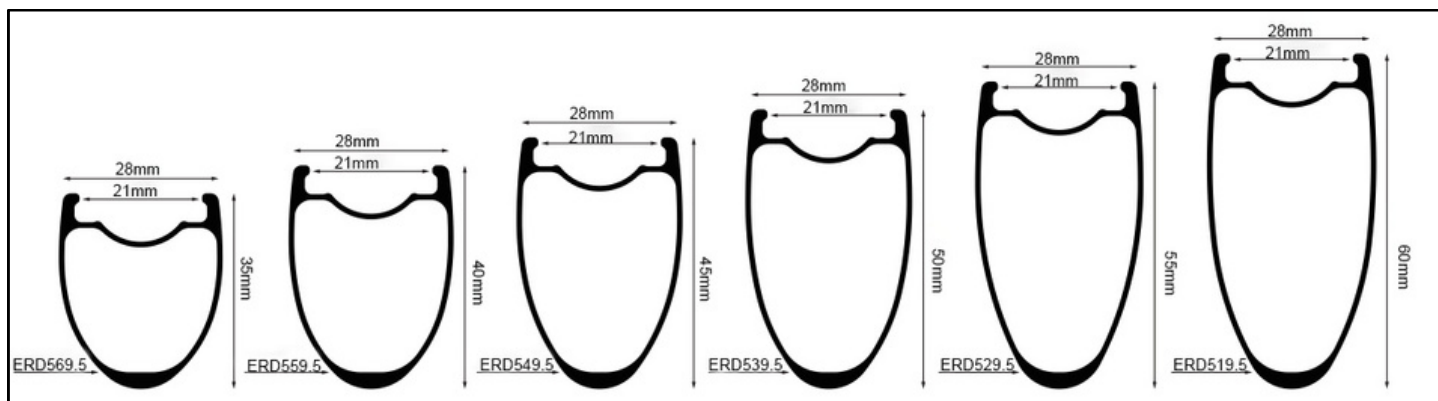
Road-700C-28mm Wide-Clincher&Tubeless



Ideal For:Road/Gravel/CX
Material:T700&T800 Mixed
Inner Width:21mm
Outer Width:28mm
Height:35/40/45/50/55/60mm
Bead:Hooked
Brake:Disc Brake
Profile:Symmetric/Asymmetric
ERD:569.5/559.5/549.5/539.5/529.5/519.5
Warranty:3 Year

Height	35mm	40mm	45mm	50mm	55mm	60mm
Ultra Light	355g	360g	385g	392g	405g	420g
Standard	370g	385g	404g	410g	423g	445g

Rim weight tolerance: ±15g



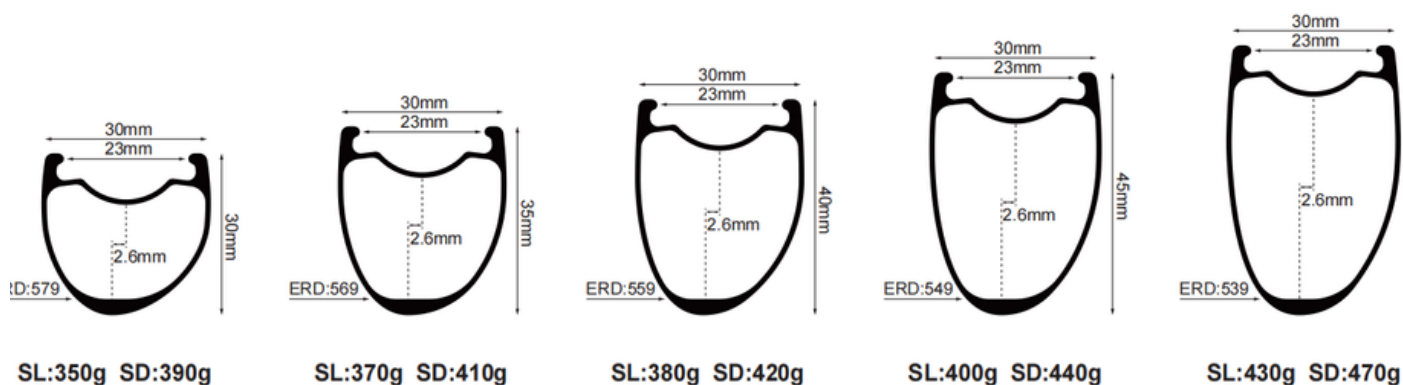
Road -700C-Undulating Rim 45/50 mm Depth



Ideal For: Road/Gravel/CX
 Material: T700&T800 Mixed
 Inner Width: 21mm
 Outer Width: 28mm
 Height: 50mm
 Bead: Hooked
 Profile: Symmetric
 ERD: 538.5mm
 Weight: 435g±15g
 Warranty: 3 Year

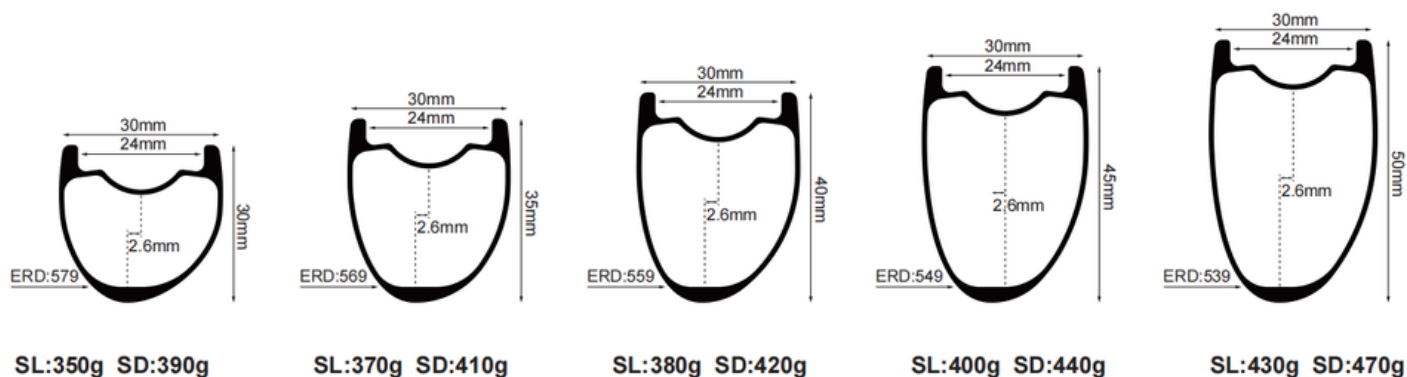
Road-700C-30mm wide-Clincher&Tubeless

Hooked



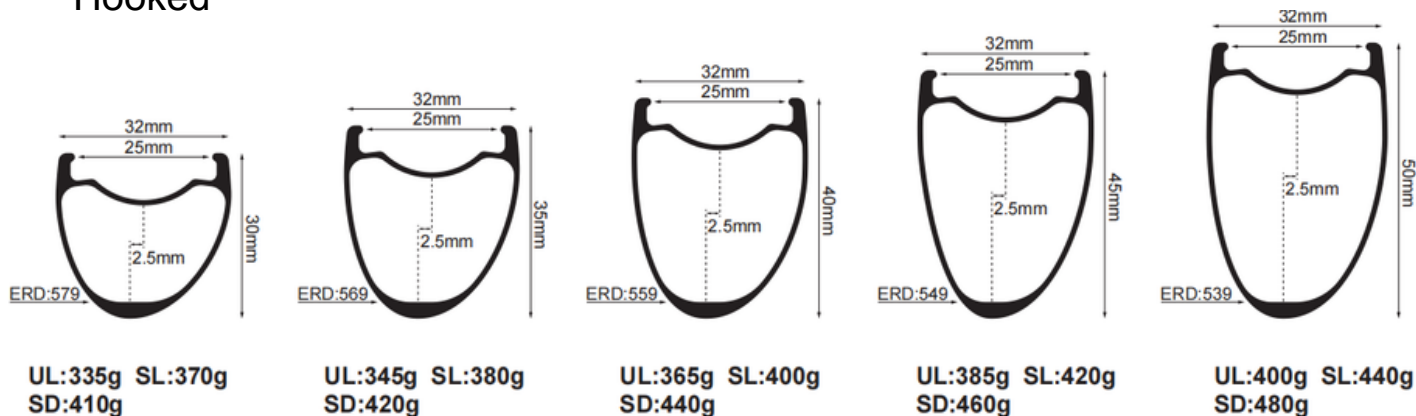
Road-700C-30mm wide-Clincher&Tubeless

Hookless

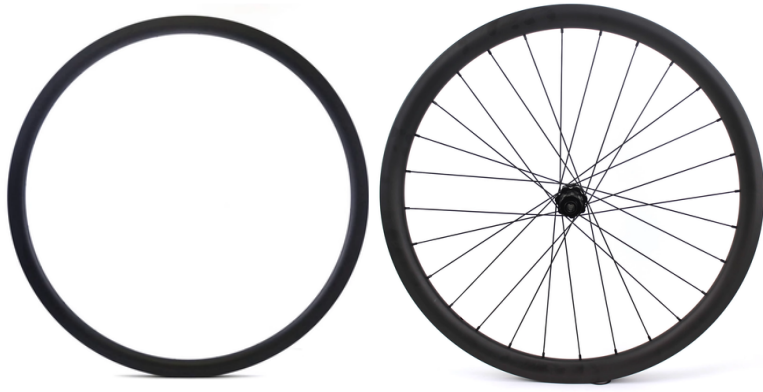


Road-700C-32mm wide-Clincher&Tubeless

Hooked



If your preferred specs are not listed, feel free to contact us with your special requirements described.



6.MTB

Designed for hill, valley, cross-country bikes.



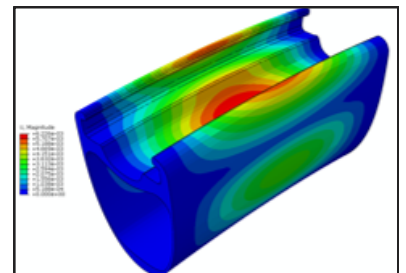
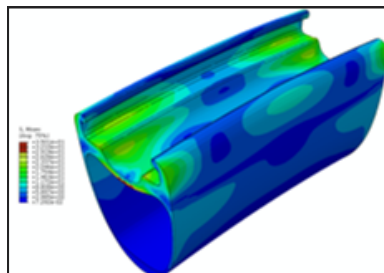
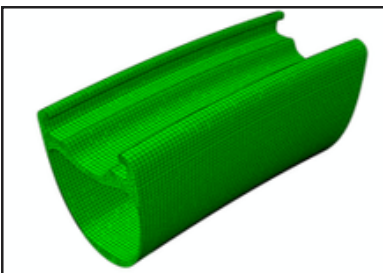
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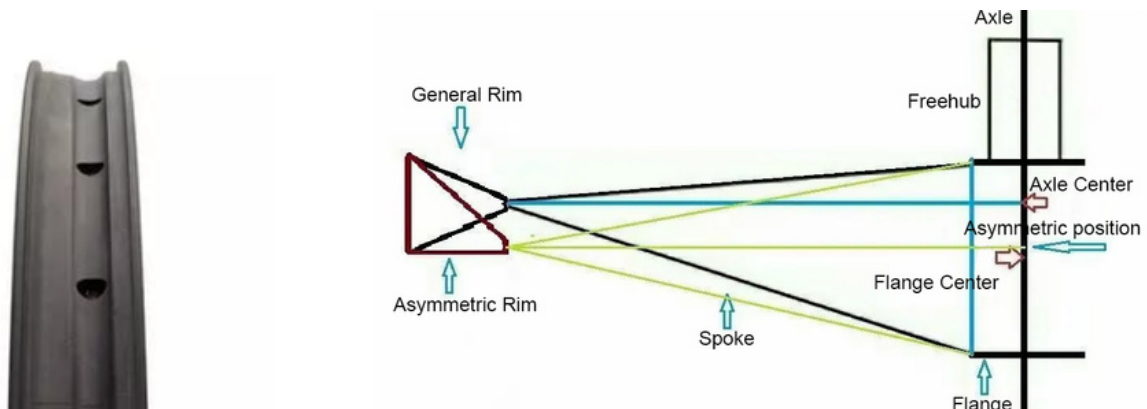
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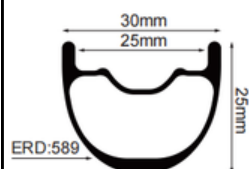


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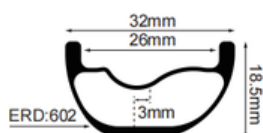
2.Product List

MTB-29ER:22-29mm inner wide

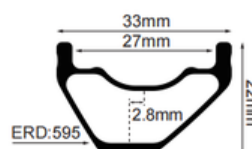
Hookless



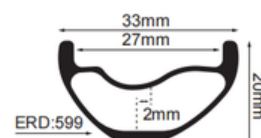
SL:320g
XC:380g



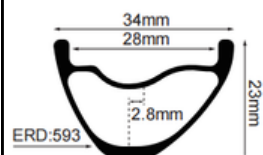
UL:290g SL:320g
XC:360g



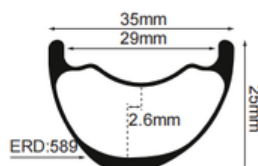
SL:320g
XC:360g



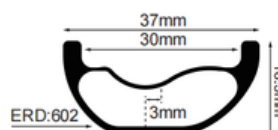
UL:265g SL:285g
XC:340g



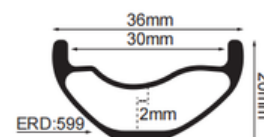
SL:310g
XC:330g



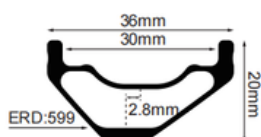
UL:320g SL:360g
AM:400g DH:450g



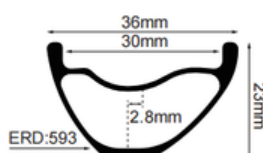
UL:320g SL:360g
AM:400g DH:450g



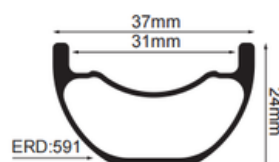
UL:285g SL:305g
AM:360g



SL:320g
AM:360g DH:450g



SL:310g
XC:340g



AM:430g DH:520g

If your preferred specs are not listed, feel free to contact us with your special requirements described.

About 3-Spoke & 4-Spoke & 6-Spoke Wheel/Triathlon/Full Disc Wheels, we only customize for customers. The private molds of customers are confidential.



AMOY WHEELS

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Wechat