IRWIN™

INNOVATION DRIVEN. RACE PROVEN.

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IRWIN designs and manufactures a highly distinctive range of wheelsets for the most demanding cyclists around the world. Our unique expertise and attention to detail is unparalleled. From choosing premium materials, achieving a consistent build, obsessive quality control and testing, our passion is to make sure our products perform at the highest level and deliver results.

IRWIN IS A DYNAMIC BRAND WITH RAZOR SHARP FOCUS ON INNOVATION AND TECHNOLOGY TO DEVELOP SUPERIOR PRODUCTS. WE ARE DEDICATED TO HELP RIDERS PERFORM BEYOND THEIR HIGHEST POTENTIAL.

Our design team is made up of highly qualified engineers and technicians who have passion for bikes, engineering and producing the highest quality product possible. Each member of the IRWIN team shares a common vision to inspire and deliver a unique riding experience every time. They ensure that our products perform flawlessly in the most extreme environments, whether it's in the unforgiving mountain passes of the Pyrenees or the blistering heat on the roads of Kona.

THE RACE TO BE THE BEST

A RELENTLESS RACE TO BE BETTER, FASTER, STRONGER. EVERY DAY.

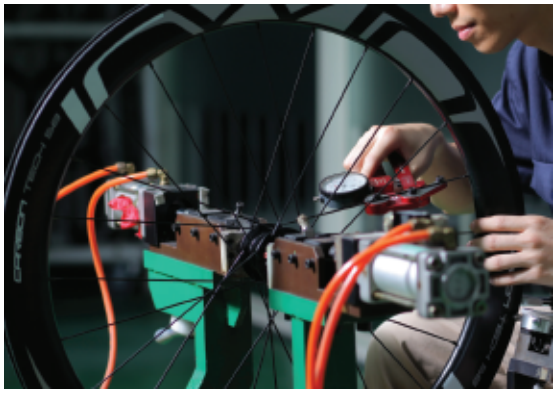
It's who we are. It's what we do. From local grassroots races to the grueling IRONMAN® triathlons, we treat these challenges as opportunities to push the limits of bicycle wheel design. It has helped us innovate and develop the most exciting race-winning carbon fiber wheels seen on the world's podiums today.

THE IRWIN DIFFERENCE

PERFORMANCE: MORE THAN PUSHING THE LIMITS OF AERODYNAMICS

It has to be the rhythmic balance of a solid build, quality materials and the right components. Every aspect of stiffness, smoothness and engagement has been thoroughly researched so no watts are wasted and our wheelsets keep you moving forward, FAST. No detail is too small and we never compromise choosing the right materials or construction. We design and develop our own carbon rim molds. Our wheels are complimented with premium components - Bespoke brake pads, Sapim spokes, ceramic bearings, factory fitted rim tapes and custom quick releases. We take pride in our innovation and craftsmanship for every wheelset that is delivered. We didn't reinvent the wheel, we refined it.

IRWIN PRODUCTS ARE DESIGNED BY OUR OWN ENGINEERS, TESTED BY OUR OWN QUALITY CONTROL SPECIALISTS USING OUR OWN LEADING-EDGE MACHINES.



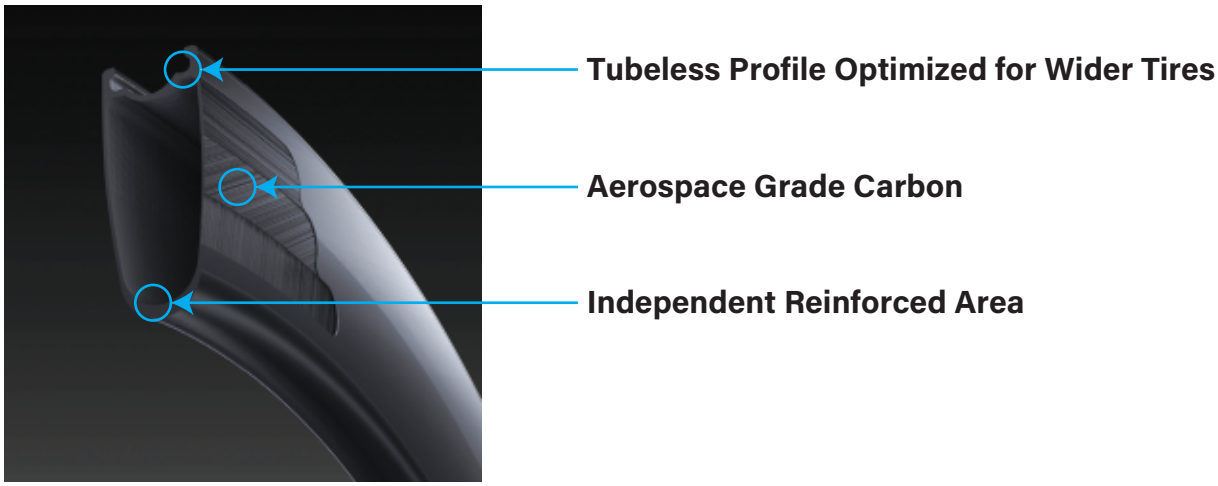
IRWIN TECHNOLOGY

IN-HOUSE WHEEL TESTING

IRWIN Cycling is one of the very few companies worldwide that has its own in-house product testing facility. Results are closely monitored and scrutinized every step of the way. This meticulous process ensures that each IRWIN wheel performs according to the strictest standards. Performance tests include the following:

TESTS	METHOD	PASS REQUIREMENT
TOURING WITH BUMPS TEST	Loading 65kg and touring at speed of 25km/h and impacting the bumps 1,500,000 times.	No damage to the wheelset's structure.
BRAKING TEST	Loading 80kg, braking force 10kg at speed of 33km/h, 2 seconds braking then 5 seconds release for 100km.	No damage to the wheelset's structure and braking surface.
NIPPLE HOLE STRENGTH TEST	Applying more than 300kg to pull nipple out off the rim until the spoke breaks.	No damage to the rim's structure.

CARBON RIM TECHNOLOGY



TUBELESS PROFILE OPTIMIZED FOR WIDER TIRES

As disc brakes and rim brake frames diverge in design and capacity, we started with a clean slate and completely redesigned our disc brake rims from the ground up. Not bounded by convention or compromises in design, we are able to create new tubeless rims optimized for disc brake.

Optimized for wider tires for improved rolling resistance and rider comfort, rim profile has been modified and evolved to adapt to wider tires.

AEROSPACE GRADE CARBON

Not all carbon are created equal. We built our wheels with aerospace grade carbon fiber, the same material that goes into airplanes and F1 race cars.

There is no "one size fits all" kind of composite material, different types of carbon fiber and resin with different types of characteristics are used to build the carbon rim. This complex structure with different carbon layup and resin schedules creates a stiff rim without increasing weight of the rim.

INDEPENDENT REINFORCED AREA

Independently reinforced area around each nipple hole reduces weight of the rim by only reinforcing areas on the rim that takes the most stress.

AERO OPTIMIZED

Better Aerodynamics, Faster Speed. Building on top of aero performance of previous generation of wheelsets and hundreds of hours combined in the wind tunnel and constant testing through Computational Fluid Dynamics (CFD), the new wheels are lighter and more aero.

With a typical rider facing head wind at a lower yaw angle (angles between 0-10°). We optimized our new rims to have lower wind resistance and therefore better aerodynamic performance within a lower yaw angle range of, which is a typical cyclist experiences average yaw angles range for more than 70% of the time he spends on the road, regardless of where he is riding.

SPOKE LACING

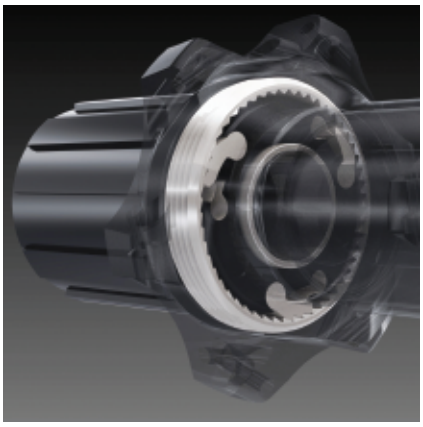
SPOKE LACING FOR ROAD BIKE WHEELSET

With our 3 pawls 7.05-degree engagement hub, we re-designed the flanges shape but kept the bracing angle as we have on the 6 pawl 3-degree engagement hub. The mechanical design of bracing angle, 2:1 spoke lacing with 3 cross lacing on the drive side, and radial lacing on the non-drive side help balance the spoke tension on the rear hub.

HUB DESIGN

SLEEK YET QUICK ENGAGING 3 PAWLS DESIGN

A major overhaul on our hubs decrease weight by 20% compared to the 6 pawls design, this allows the hub to become smaller and lighter. The 51 ratchets design still has quick response to transfer riders power into speed without sacrificing engagement.



HUB MECHANISM DESIGN

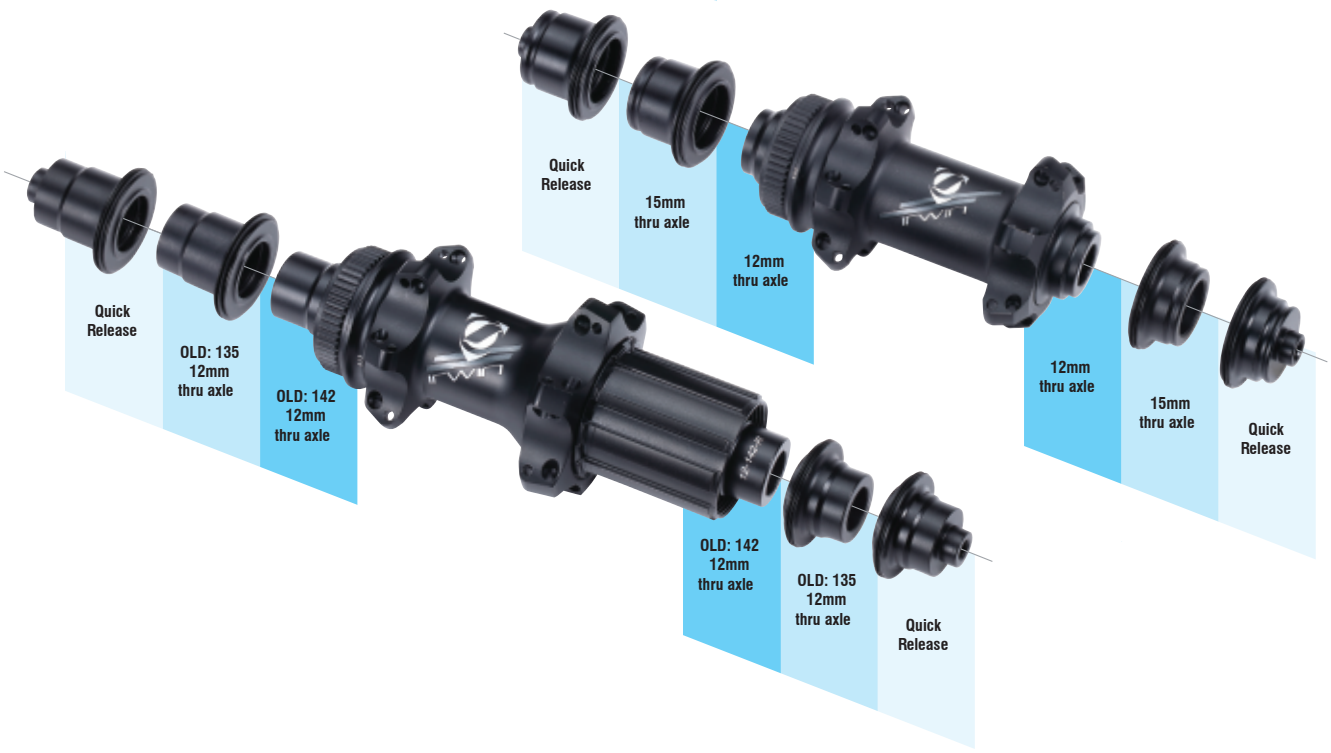
Bearings coupled with shouldered axles provide better hub support while prolonging the life span of the bearings.

FUTURE PROOF PRESS FIT END CAP DESIGN

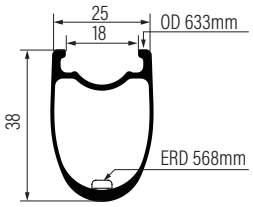
Inheriting all the design features from the road hub, the road disc brake hub also features future proof press fit end cap design. Interchangeable end caps allow wheels to be compatible with new thru axle standards.

3-IN-1 ROAD DISC BRAKE HUBS SYSTEM

The 3-in-1 road disc brake hub system uses replaceable end caps to allow a single hub to be used with multiple frame and fork drop out designs. Both 6 pawls and 48 ratchets hubs and 3 pawls and 51 ratchets hubs come with 12mm thru axle end caps in the front and 12x142mm thru axle end caps in the rear, but can be converted to standard quick release or 15mm thru axle end caps in the front, and standard quick release or 12x135mm thru axle end caps in the rear.



CARBON FIBER WHEELS



AON TLR 38

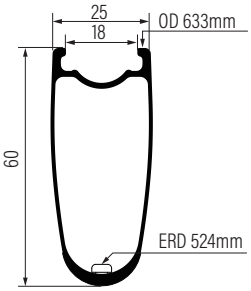
SAPIM SPOKES AND NIPPLES TLR TUBELESS-READY

AON TLR 38 | Carbon Road Wheels

- Rim Profile: 38mm deep profile tubeless ready UD full carbon clincher
- External / Internal Width: 25mm / 18mm
- Spokes: Front 16; Rear 21. Sapim CX-Ray. Black
- Hub: 3 pawls, 51 engagement. Ceramic bearings
- Interchangeable with Campagnolo cassette body, SRAM XDR driver
- 6 sealed cartridge ceramic bearings (2F + 4R) reduce friction and maximize product longevity
- External nipple design for easy maintenance
- Hand-built with precision and pre-installed with TLR rim tape

IRWIN IRH-03

ROAD



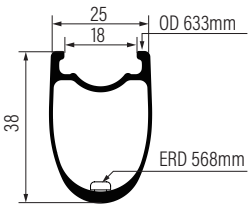
AON TLR 60

SAPIM SPOKES AND NIPPLES TLR TUBELESS-READY

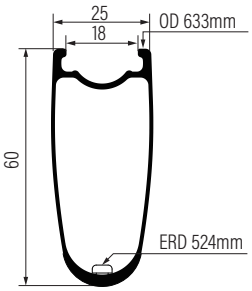
AON TLR 60 | Carbon Road Wheels

- Rim Profile: 60mm deep profile tubeless ready UD full carbon clincher
- External / Internal Width: 25mm / 18mm
- Spokes: Front 16; Rear 21. Sapim CX-Ray. Black
- Hub: 3 pawls, 51 engagement. Ceramic bearings
- Interchangeable with Campagnolo cassette body, SRAM XDR driver
- 6 sealed cartridge ceramic bearings (2F + 4R) reduce friction and maximize product longevity
- External nipple design for easy maintenance
- Hand-built with precision and pre-installed with TLR rim tape

IRWIN IRH-03



AON TLR 38



AON TLR 60

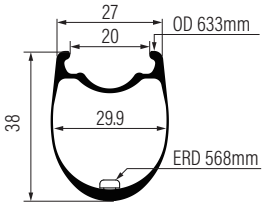
SAPIM SPOKES AND NIPPLES TLR TUBELESS-READY

AON TLR 38/60 | Carbon Road Wheels

- Front Rim Profile: 38mm deep profile tubeless ready UD full carbon clincher
- Rear Rim Profile: 60mm deep profile tubeless ready UD full carbon clincher
- External / Internal Width: 25mm / 18mm
- Spokes: Front 16; Rear 21. Sapim CX-Ray. Black
- Hub: 3 pawls, 51 engagement. Ceramic bearings
- Interchangeable with Campagnolo cassette body, SRAM XDR driver
- 6 sealed cartridge ceramic bearings (2F + 4R) reduce friction and maximize product longevity
- External nipple design for easy maintenance
- Hand-built with precision and pre-installed with TLR rim tape

IRWIN IRH-03

ROAD DISC BRAKE



AON DX 38

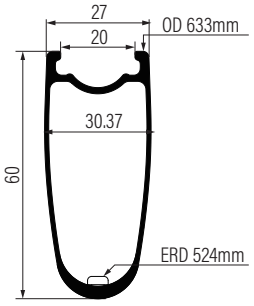
SAPIM SPOKES AND NIPPLES TLR TUBELESS-READY

AON DX 38 | Carbon Road Disc Brake Wheels

Rim Profile: 38mm deep profile tubeless ready UD full carbon clincher
- External / Internal Width: 27mm / 20mm
- Spokes: Front 24; Rear 24. Sapim CX-Ray. Black
- Hub: 3 pawls, 51 engagement. Center Lock. Enduro bearings
- Interchangeable with SRAM XDR driver and Shimano 12S
- Convertible end caps for any standard axle configurations
- External nipple design for easy maintenance
- Hand-built with precision and pre-installed with TLR rim tape

IRWIN IRDH-05

ROAD DISC BRAKE



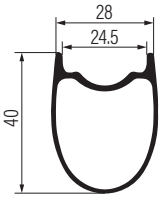
AON DX 60

AON DX 60 | Carbon Road Disc Brake Wheels

- Rim Profile: 60mm deep profile tubeless ready UD full carbon clincher
- External / Internal Width: 27mm / 20mm
- Spokes: Front 24; Rear 24. Sapim CX-Ray. Black
- Hub: 3 pawls, 51 engagement. Center Lock. Enduro bearings
- Interchangeable with SRAM XDR driver and Shimano 12S
- Convertible end caps for any standard axle configurations
- External nipple design for easy maintenance
- Hand-built with precision and pre-installed with TLR rim tape

IRWIN IRDH-05

CX/GRAVEL



AON ARX 40

AON ARX 40 | Carbon Road Disc Brake Wheels

- Rim Profile: 40mm deep profile tubeless ready UD full carbon clincher designed for wider tires
- External / Internal Width: 28mm / 24.5mm
- Spokes: Front 24; Rear 24. Sapim CX-Ray. Black
- Hub: 3 pawls, 51 engagement. Center Lock. Enduro bearings
- Interchangeable with SRAM XDR driver and Shimano 12S
- Convertible end caps for any standard axle configurations
- External nipple design for easy maintenance
- Hand-built with precision and pre-installed with TLR rim tape

IRWIN IRDH-05

COMPARISON CHART

Model	Rim material	Tubeless Ready = TLR	Weight / set (g)	Rim depth (mm)	Rim internal width (mm)	Rim external width (mm)	Spoke count F/R	Spoke pattern F/R	Spoke type	Spoke length front disc side (mm)	Spoke length front non-disc side (mm)	Spoke length rear drive side (mm)	Spoke length rear non-drive side (mm)	Nipple front	Nipple rear	RIM FINISH	OLD OPTIONS F/R	
																UD finish	F : QR 100mm / R : QR 130mm	F : QR, 12 x 100mm, 15 x 100mm / R: QR, 12 x 135mm, 12 x 142mm
AON TLR 38	Carbon	TLR	1355	38	18	25	16 / 21	Radial / 3X-Radial	Sapim CX-Ray		272	290	268	Alloy	Alloy	•	•	
AON TLR 60	Carbon	TLR	1470	60	18	25	16 / 21	Radial / 3X-Radial	Sapim CX-Ray		250	268	246	Alloy	Alloy	•	•	
AON TLR 38 / 60	Carbon	TLR	1410	38 / 60	18	25	16 / 21	Radial / 3X-Radial	Sapim CX-Ray		272	268	246	Alloy	Alloy	•	•	
AON DX 38	Carbon	TLR	1570	38	20	27	24 / 24	2X / 2X	Sapim CX-Ray	282	284	282	284	Alloy	Alloy	•		•
AON DX 60	Carbon	TLR	1650	60	20	27	24 / 24	2X / 2X	Sapim CX-Ray	260	262	260	262	Alloy	Alloy	•		•
AON ARX 40	Carbon	TLR	1455	40	24.5	28	24 / 24	2X / 2X	Sapim CX-Ray	280	282	280	282	Alloy	Alloy	•		•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