Neuvation Wheel Choosing Chart

More than you ever wanted to know about choosing a wheel set.

What do you look for in wheels? Lightness, aerodynamics, durabilty, appearance and price. Don't buy into other makers claims of technology. Technology is only good if it advances one of these features. You may want to add bearing quality but for almost all quality wheels it's not much of an issue because almost everyone uses cartridge bearings which are both inexpensive and good. Focusing only on the alloy clincher wheels (98% of our sales) unless you are over 200 pounds get the lighest your budget will allow. The failure mode for all low spoke count wheels are rear rim cracks (makes you wonder why you see all of those weird spokes doesn't it?). They are more common than in the past because you are using fewer spokes (which offer much lower weight and better aerodynamics). For that reason all of the rear wheels below use a heavier rear rim so they are all about equally durable. If you are over 200 (or hard on wheels) you may want to go with the M28 Aero wheels for a little extra strength.

Wheel specs. If you area already knowledgeable about wheels this is the go to place for real info.

Road	Weight*	Rim	Join*	Rim Width	Rim Depth	Hub*	Spokes	Spoke Gauge	Nipples spokes wrench type	Spoke Length	Durability*	Every day use?	Road Racing	Cross*	Sram, Shimano	Campy
M28X Aero Front	760	700C 6066 alloy 480gr	Sleeved	19 mm	27 mm	M series	16	Aero 2.3/(.9/3.0)/ 2.0	Brass Nickel Plate Park Tool Black	284	9	Yes	Yes	Yes		
M28X Aero Rear	990	700C 6066 alloy 480gr	Sleeved	19 mm	27 mm	M series	20	Aero 2.3/(.9/3.0)/ 2.0	Brass Nickel Plate Park Tool Black	276 DS 279	8	Yes	Yes	Yes	8, 9 ,10	No
R28X Aero Front	690	700C 6066 alloy 440gr	Sleeved	19 mm	27 mm	R series	16	Aero 2.3/(.9/3.0)/ 2.0	Alloy Silver Park Tool Black	284	8	Yes	Yes	Yes		
R28X Aero Rear	930	700C 6066 alloy 480gr	Sleeved	19 mm	27 mm	R series	20	Aero 2.3/(.9/3.0)/ 2.0	Brass Nickel Plate Park Tool Black Alloy NDS	276 DS 279	8	Yes	Yes	Yes	8, 9 ,10	9,10,11
R28X SL Front	640	700C 6066 alloy 440gr	Sleeved	19 mm	27 mm	R series	20	Round 14G 2.0/1.5.2.0 Sapim	Alloy Silver Park Tool Black	282	9	Yes	Yes	Yes		
R28X SL Rear	880	700C 6066 alloy 480gr	Sleeved	19 mm	27 mm	R series	24	Round 14G 2.0/1.5.2.0 Sapim	Brass Nickel Plate Park Tool Black	280 DS 275	9	Yes	Yes	Yes	8, 9 ,10	9,10,11
R tubular Front	640	tubular 6066 alloy 440 g	Welded	20 mm	22 mm	R series	20	Round 14G 2.0/1.5.2.0 Sapim	Alloy Silver Park Tool Black	284	9	Yes	Yes	Yes		
R tubular Rear	840	tubular 6066 alloy 440 g	Welded	20 mm	22 mm	R series	24	Round 14G 2.0/1.5.2.0 Sapim	Alloy Silver Park Tool Black	279DS 287	9	Yes	Yes	Yes	8, 9 ,10	9,10,11
C50 Tubular Front	650	tubular carbon 435 gr		20 mm	50 mm	R series	20	Round 14G 2.0/1.5.2.0 Sapim	16 mm long Alloy Silver Park Tool Black	257	6	Maybe	Yes	Yes		
C50 Tubular Rear	830	tubular carbon 435 gr		20 mm	50 mm	R series	24	Round 14G 2.0/1.5.2.0 Sapim	16 mm long Alloy Silver Park Tool Black	251	7	Maybe	Yes	Yes	8, 9 ,10	9,10,11
C50 Clincher Front	720	700C carbon 520 gr		20 mm	50 mm	R series	20	Round 14G 2.0/1.5.2.0 Sapim	16 mm long Alloy Silver Park Tool Black	257	6	Maybe	Yes	Yes		
C50 Clincher Rear	880	700C carbon 520 gr		20 mm	50 mm	R series	24	Round 14G 2.0/1.5.2.0 Sapim	16 mm long Alloy Silver Park Tool Black	251	7	Maybe	Yes	Yes	8, 9 ,10	9,10,11

MTB

MTB MX Front	900	26"	Pinned		20 mm		28	2.0 stainless	Brass Nickel Plate Park Tool Black	254	10	Yes				
MTB MX Rear	1100	26"	Pinned		20 mm	M series Disc	28	2.0 stainless	Brass Nickel Plate Park Tool Black	252 DS 256	10	Yes			8,9,10	

Weight* Wheels vary in weight by as much as 50 grams. All wheels do because rims are made with tolerances. The saying that many use of "no comprimises" clearly shows that they have never really built anything. The basic strength vs weight issues is an excellent example. You have to comprimise one versus the other. You can throw that marketing pitch right in with being "the best." The more marketing sales pitches I read the more my head aches. Do these people actually think before the write stuff like that?

Join* All alloy rims are extruded in a straight bar which is rolled and cut with a saw. Given a choice we prefer a sleeved rim because it builds up a lot better than the welded rims preferred by Mavic and Bontrager. There is no loss of strength in a sleeved rim. The heat from welding a rim deforms the joint so spoke tension is comprimised making it possible to go out of round sooner than a sleeved rim. It also increases the cost of the rim. Our tubualr rim is welded because the maker doesn't offer it sleeved. The MTB rim is pinned - just as strong as the other method but also a little heavier.

Hubs* All front hubs are the same except for the number of holes and the flange shape. All rear M series hubs have a steel cassette body that only fits Shimano or Sram (8,9, 0r 10 speeds) and is virtually silent. The R series rear hub has an alloy body. All alloy bodies using the smaller notches (Shimano 8,9 and most 10 and Sram) have a tendency to notch up but they are lighter than steel and the notching in almost all cases is cosmetic. The R series also have a Campy cassette body option. Switching between Shimano and Campy bodys is very simple. Note M and R series have no meaning at all.

Durability* Low spoke count wheels are not as strong as the older 32 and 36 spoke wheels but they are a lot lighter and you will go faster because the lower spoke count means they are much more aerodynamic. Our rim replacement pricing of $65 for any alloy wheel means that it's not catistrophic if you crack a rim (it's like replacing a chain). But if that gives you the willies you should buy a 32 or 36 spoke wheel and go slower. This is the same for all makes of low spoke wheels no matter what anyone tells you.

Cross* isn't hard on wheels beause you are riding big tires with low pressure. Get the lighest you can afford. It's really important for cross because you are constantly getting up to speed and that's where wheel v