

One of the great things about spoked wheels is that there are a great many choices of rims and spokes so that you can make your wheels individual to your bike. This can also make choosing from the options a bit confusing so we have tried to explain each of the types below.

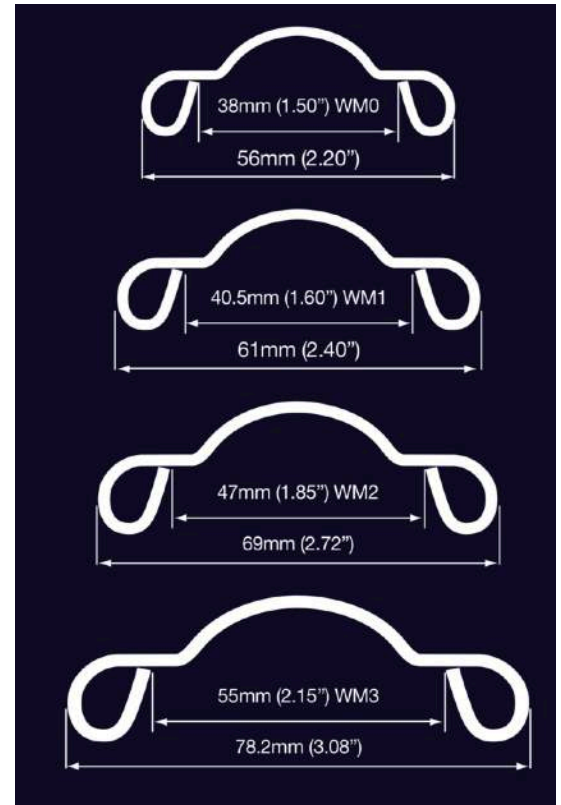
Steel Rims

These are the classic choice for many bikes and were fitted to almost every manufacturer's machines up to the 1980's. They are strong and durable and because they are still produced in volume they offer very good value for money.

Steel rims are available in various diameters and widths based on imperial measurements. They are not produced in wider sections so they are only suitable for tyres up to about 120 section.

There are several options of finish for steel rims:

- Bare Steel - These are suitable for painting.
- Standard Chrome - These rims are chrome plated before being drilled and offer the best value for a chrome plated rim.
- British Chrome - These rims are drilled before plating to reduce the chance of corrosion around the spoke holes. They are copper and nickel plated prior to chrome plating and stamped "Made in England"
- Elite Chrome - The raw rim sections are polished, dimpled and drilled to original specifications and then given an extra polish before plating. The process consists of two layers of Copper, followed by two of Nickel and Chrome. This produces a thicker, deeper chrome plated finish.
- Stainless Steel - These polished rims are almost indistinguishable from chrome and provide a 'no rust' solution when rebuilding the wheels on your restoration project. Extremely durable, they are long lasting and will polish up like new for years to come.



Steel Rim Profiles

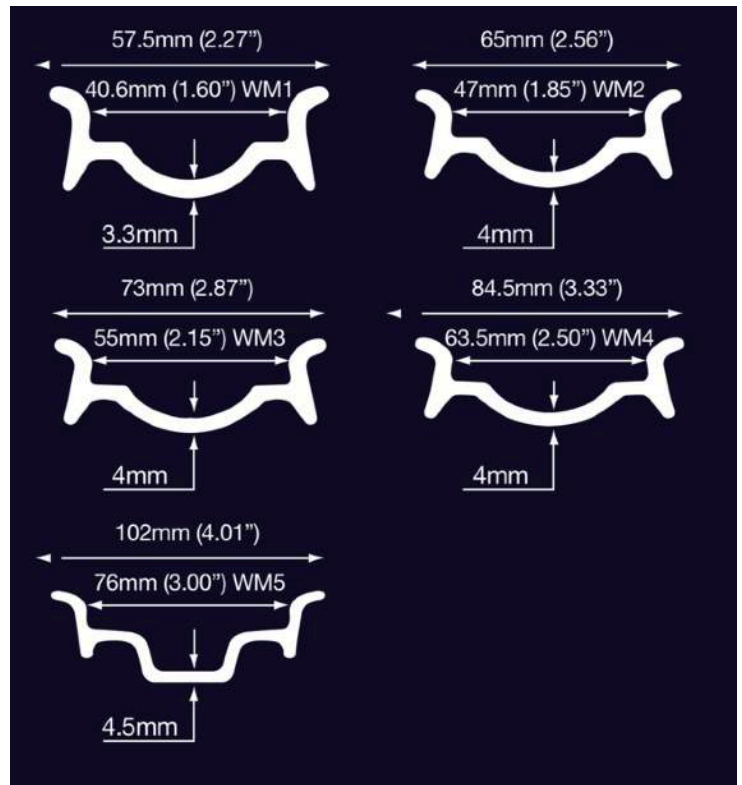
Aluminium Rims

Aluminium rims offer a lighter rim which reduces the unsprung weight and inertia of the wheel for better control. They can trace their history back to the 1930's when Italian company Borrani acquired licences from Rudge of England to produce wheel components. By 1934 aluminium rims began to be seen on racing motorcycles such as Moto Guzzi.

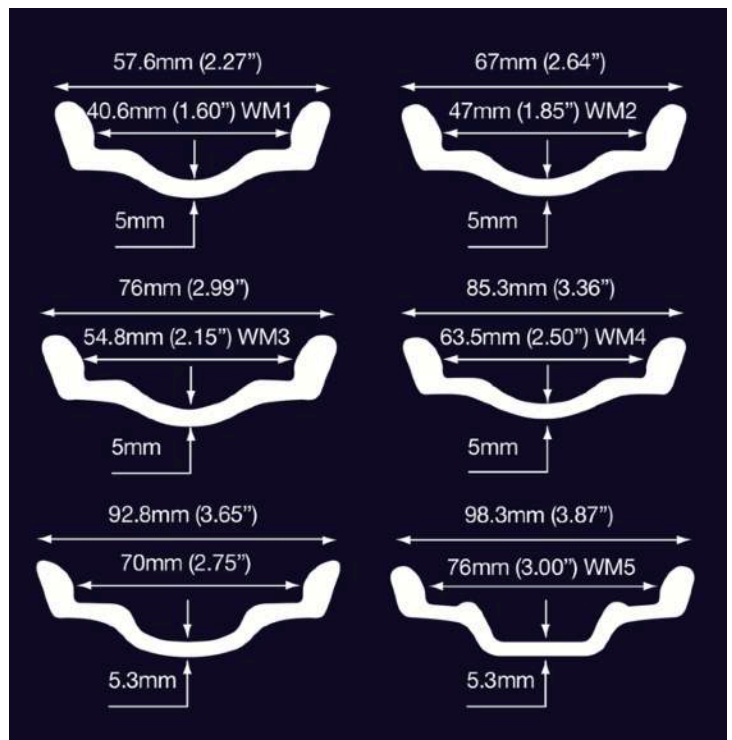
The original rim profile for aluminium rims is known as "valanced" which refers to the deep flanges on the outer walls of the rim. This profile placed extra section depth of material at the high stress portion of the rim. This profile creates a classic retro look for a wheel which is very attractive.

As development of Aluminium alloys improved and their strength increased it was no longer a requirement to have the deep flanges on the rim and so "Non Valanced" profiles were introduced. These are now the most popular type of aluminium rim and are produced in a great variety of diameters and widths allowing fitment of wide section tyres.

Aluminium rims are supplied with a polished finish as standard. However, they can be anodised or painted for a coloured appearance.



Valanced Profiles



Non - Valanced Profiles

Spokes

Spokes are supplied in various thickness of wire corresponding to "Standard Wire Gauge" or "SWG" which is an old imperial measuring system.

Gauge Diameter	
12	= 2.60mm (0.104")
10	= 3.20mm (0.124")
9	= 3.60mm (0.142")
8	= 4.00mm (0.156")
7	= 4.30mm (0.171")
6	= 4.87mm (0.192")
5	= 5.15mm (0.203")
4	= 5.70mm (0.224")

Traditionally spokes were manufactured from steel wire which would be zinc plated (galvanised) after the spoke was formed to provide corrosion protection.

Alternatively spokes were painted or chemical blackened to match rim finishes.

Today we supply spokes made from stainless steel which is far more durable. Modern stainless steel alloys offer the correct amount of toughness for spokes in excess of their plain steel predecessors.

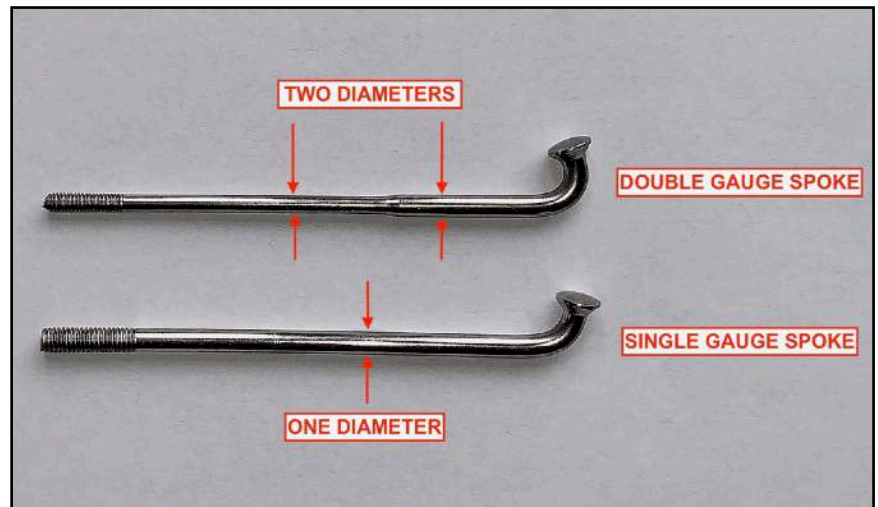
The threads on spokes must be rolled not cut. This type of thread forming creates a much stronger thread profile. You can tell if a thread has been rolled onto a spoke as it will be slightly larger in diameter than the plain portion of the wire.

Depending on the hub design there may be up to 4 different spoke lengths and bend angles used in a single wheel.

Not all spokes are made from one diameter of wire, it is common for the part of the spoke that passes through the hub to be a larger diameter. This increases strength and provides a greater bearing surface area between the spoke and the hub. This type of spoke is called "double gauge" or "butted".

Stainless Steel Spokes are supplied with a highly polished finish which looks very similar to chrome plating.

They can also be chemically blacked after forming.



Nipples

To keep costs down many motorcycle manufacturers used plated steel nipples with plated steel spokes. This combination looks good in the showroom but after some years use and weather rust begins to appear. The nipples corrode onto the spokes making adjustment impossible and then it is time for a rebuild.

We fit nipples made from brass which has been nickel plated. There are important advantages to this combination, brass does not rust so that problem is eliminated. Also all the materials in contact within the wheel are of dissimilar materials, this reduces the chance of galvanic corrosion occurring which also ensures a long life for your wheel.

Nipples are also available in Aluminium with an anodised finish which is very attractive. These are only recommended for fitment to off road bikes as they are not as strong as brass nipples. They are popular with custom bike builders.

