

TIRE & RIM SIZES

Around 1900 the bicycle and tire industry in several countries reached mutual agreements about the dimensions of rims and tires. These national agreements are the cause of the huge variety in size designation. The tire sizes in inches are so called "nominal sizes". The diameter of the wheel with inflated tyre was the original size. Now there is an organization that regulates the size designation: the European Tyre and Rim technical organisation. These ETRTO-sizes are available on virtually all tires (in mm).

An example is: 37-590. The first number indicates the diameter of the tyre in inflated condition (37 mm); the second number (590 mm) is the diameter of the bead of the tyre i.e. the place where the tyre holds itself fixed on the rim. This size is also known as 26 x 1 3/8. **But there are 5 rim diameters which are called 26 inch: 559, 571, 584, 590 and 597mm. Those tires are not interchangeable!**

When we calculate the 26 x 1 3/8 size in millimeters, the diameter of the wheel with inflated tyre is: 37 + 590 + 37 = 664mm. If we recalculate it from the old inchsize it is: 26x25,4 = 660mm; there is only 4mm difference. The standard English 28x1 1/2 size is in ETRTO: 40x635, so in total 715mm. If we convert from inches: 28x25,4 = 711mm. This is close too. The most used French 28 "-size (700C) has a rim diameter of 622. It is our standard 23 mm racing tyre; the size is in ETRTO: 23x622. So the actual size is: 23 + 622 + 23 = 668mm and the French call that 28 inches too! A recent confusing size is the 29 "ATB-tyre with a 622mm rim! In the chart we can see that the tyre 16 x 1 3/8 has two ETRTO sizes; we find the size 37-349 in English (folding) cycles.

The standard English 27x1 1/4 size is in ETRTO: 32x630. This means that the diameter of a French 28 inch rim is smaller, than the diameter of an English 27 inch rim. It should be clear that an English 28 inch tyre does not fit a French 28 inch rim! Manufacturers often indicate inaccurate sizes for their tire width; they are often narrower.

For the tire 60-787 (36x 2 1/4) see <https://www.circus-expert.nl>

Download the Spokelength Calculation app below and the Swallow tire sizes oversight.