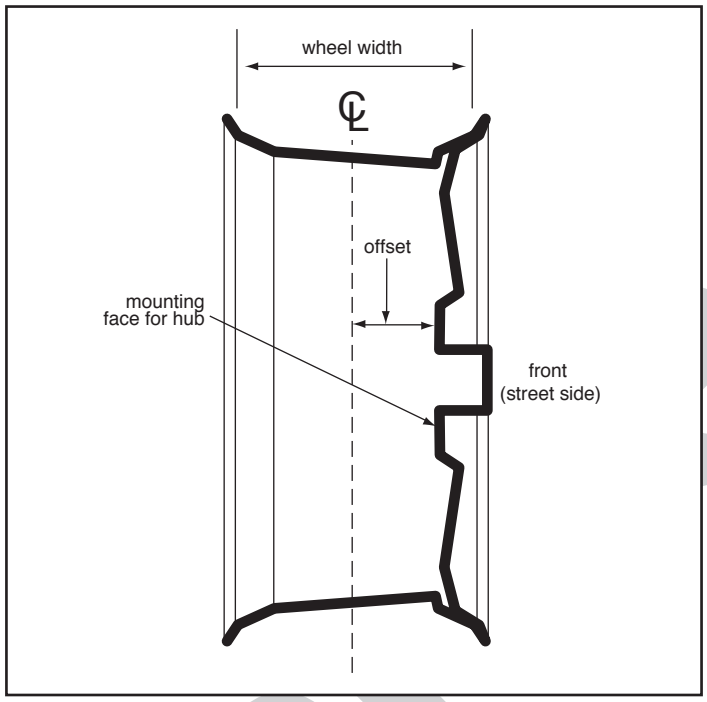
centerline products

Tire and Wheel Size Information

Wheel Offset
Wheel offset describes the distance that the hub mounting face of a wheel is offset from the wheel's centerline. A positive offset is when the mounting face is outside of the wheel centerline. Negative offset is the opposite, with the mounting face inside of the wheel centerline. See example of a positive offset wheel below:



Speed Rating Identification
The speed rating of a tire is the maximum speed that it is safely capable of sustaining for extended periods. This is denoted by a letter code, which will appear on the tire sidewall in one of three ways:

205/60 HR–14
205/60 HR–14 89H
205/60 R–14 89H

The rating code is as follows:

Q =100 MPH	H = 130 MPH
S = 112 MPH	V = 149 MPH
T = 118 MPH	Z = 149+ MPH
U = 124 MPH	

"R" refers to radial construction.
"89" is a load rating index.

Tire Size

205/60 – 14:

205 The approximate cross section width of the tire in millimeters.
60 The ratio between the height of the tire and the cross section width. The sidewall of this tire is 60% as high as it is wide. A smaller aspect ratio generally provides a stiffer sidewall with more sporting handling characteristics and some deterioration in ride quality.
14 The outside diameter of the wheel in inches.

Calculating Overall Tire Diameter

With this formula you can figure out how to fit a wider, lower profile tire with little change in overall diameter. Thus you can improve grip while retaining speedometer accuracy.

The formula for overall tire diameter is:

$$\frac{(\text{Cross section width} \times \text{Aspect ratio}) \times 2}{25.4} + \text{Wheel Diameter} = \text{Overall Tire Diameter}$$

As an example, let's use the original tire size on a Giulietta: 155/78 – 15.

155 Approximate cross section width in millimeters.
78 Aspect ratio which is converted to "0.78"
15 Wheel diameter in inches.

$$\frac{(155 \times 0.78) \times 2}{25.4} + 15 = 24.52"$$

The tire size we would like to use is 185/65 – 15. If we plug in the new tire size into our formula, we get:

$$\frac{(185 \times 0.65) \times 2}{25.4} + 15 = 24.47"$$

These two diameters are very close, so speedometer accuracy and final drive ratio would be unchanged by changing from a 155/78 – 15 to a 185/65 – 15 but the tire contact patch would be much enlarged for improved handling and braking.