

Measurement of the belt line for Bicycles with rear Internally Geared Hubs – using a Vernier Caliper

Step 1:

The belt line is measured from the center of the frame to the center of the belt / sprocket.

The beltline can be directly measured from the front with a Vernier Caliper.

Therefore, firstly we must measure the diameter of the Seat tube (see Figure 1).



Figure 1: Measuring the seat tube

In the example measurement photo, the Vernier Caliper shows a diameter of 32.23mm. This diameter is now divided by two. This gives a value of 16.11mm.



Step 2:

In the second step, the Vernier Caliper is placed α n the left side of the seat tube in the direction of travel

and applied to the center of the belt or sprocket (see Figure 2).

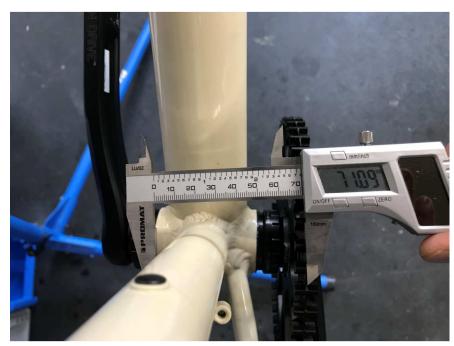


Figure 2: Measurement to center of belt / sprocket

In the example measurement photo, the Vernier Caliper shows a diameter of 71.09mm. From this value you must subtract the half of the seat tube (16.11mm from Step 1).

→ 71.09mm-16.11mm = 54,98mm

This calculated value gives you the belt line at the front sprocket which in-turn, this value must be transferred to the rear sprocket

with the max beltline tolerance of +/- 1.5mm.

The belt line on the rear sprocket is given by the hub and the values can be found in our technical manual -

(http://www.gatescarbondrive.com/~/media/files/gcd/gates-tech-manualen.pdf?la=en) on pages 51-55.

The requirement for this type of measurement, is to ensure the frame is free of large tolerances, and very well aligned.