

Inspeed Vortex ACCURACY STATEMENT - With Bicycle Speedometer Displays

Inspeed anemometers (with displays) are guaranteed to be accurate to +/- 1 mph or 4% of reading, whichever is greater, in the range of 10mph to 50mph.

That means that at 10 mph the accuracy is +/- 1 mph and at 50 mph it is +/- 2mph.

We find that given the natural variability in actual wind speeds, this accuracy is not only competitive with instruments that cost two to four times as much, it provides all the accuracy necessary for our intended markets.

NOTE that this accuracy requires and assumes that the wheel size (WS) is set according to the instructions provided by Inspeed.

LOW SPEED RANGE (below 10 mph) : we find that the lowest practical, usable speed for the Inspeed anemometers is approximately 5 mph. Below that the pulse rate and friction are not suitable for proper, reliable measurements. If the intended applications require high accuracy in the 1-10 mph range we would recommend impeller-type sensors (which we do not make or sell!).

MID SPEED RANGE (10 to 50 mph):

Believe it or not, we could not find a wind tunnel capable of verifying our anemometers at speeds higher than 50 mph. We sent our anemometer/BC1200 display to Davis Innotek, where it was verified in their calibrated wind tunnel.

The results are shown in the table below, where the error was approx. 0.7 mph at 10 mph and 1.5 mph at 45.5 mph.

vortex™ CALIBRATION CHART



Call our expert customer service team Australia wide on **1300 737 871** for expert advice from our scientists!

ABOVE 50 mph

We could not find a wind tunnel able to verify our instruments at speeds over 50 mph (please CONTACT US if you know of a source that can), all our accuracy data above 50 mph is implied and anecdotal - based on customer feedback and personal experience. Given the linearity of the output of the rotor, and with reference to our supplier (Cape Cod Wind & Weather), we believe the accuracy of Inspeed anemometers to be 4% of reading up to at least 125 mph - more like 175. We just don't know! This accuracy, however, has not been verified. All we have is customer feedback where the readout has been compared to vehicle speedometers in calm conditions at speeds well over 100 mph. We also have customers with other devices and who compare results.

The maximum speed of the anemometer is not known. We have photos of customers pointing high pressure air at the cups and producing 195 mph output - so we know it can spin that fast...