

## Anemometer with 75mm Cups - Improved



Fergy7

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### Summary

A rotor assembly for use within an anemometer.

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The holes are sized for six 3mm dowel pins. The sample shown was printed on a Lottmax Shark V3 printer (love this printer) at 0.15 resolution and 30% infill after being sliced in Cura. After building a mechanical prototype I've decided to have each cup have a pair of 3mm holes and pins for stability and since it's difficult to bond to a single 3mm pin. I've also blinded the distal ends of the cup holes so that adhesive is only required between the rails and hub. The main shaft will be 5mm in diameter. Working on whether or not the design requires bearings.

UPDATE -I decided it was better to integrate the spars with the central hub & employ much shallower cups joined, via anaerobic adhesive, to the spars of the rotor via small printed pins. The employment of the pair of metal dowels across the face of the cups turned out to be totally unnecessary and added much deleterious weight. Testing confirmed that the minimum breeze to start turning the rotor was happily much reduced.

# Model files



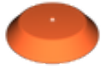
cup\_anemometer\_75mm\_rev-01.stl



hub\_anem\_02.stl



cup\_anem\_02.stl



cupanemometer\_03.stl



pinlocating\_01.stl



rotor\_05.stl

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