



## wind spinner v5

N Nikdfish

VIEW IN BROWSER

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### Summary

A wind spinner sized for larger print beds (300mm+). Uses a 35 degree sail blade pitch.

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Tags: [spinner](#) [windmill](#)

This is a larger iteration of my wind spinner design ( <https://www.prusaprinters.org/prints/96489-wind-spinner-v3> ). This was done with the Creativity ELF build plate in mind for the component dimensions. Sail blades, root to tip, are about 270mm. The tail is 260mm x 120mm.

The hub is printed in two parts so as to enclose a 608RS bearing and to capture the sail blades with the same 3mm bolts used for hub assembly.

Both the hub axle & rotation pin are 5/16" bolts, 2" for the horizontal & 1 1/2" for the vertical. The bearings are 608RS, one for the hub and two for the stake mount. I did use a bit of aluminum tape to shim the horizontal bolt for a tighter fit on the 608RS bearing.

The stake mount is sized for placement on a 3/8" all-thread rod used as a mounting stake.

## Print Settings

### Printer:

Creativity ELF coreXY

### Rafts:

No

### Supports:

No

### Resolution:

0.2

### Infill:

15

**Filament:** any PLA+ or PETG

### Notes:

Nose and base parts should be printed flat side down. Generally no supports are needed or desired if the machine does an adequate job of bridging.

I typically rinse the grease out of the 608 bearings with a bit of mineral spirits, then lubricate with light oil. This reduces rolling friction and allows movement in very light breezes. Remove the shields before rinsing then replace after oiling.

CA glue is a shorthand for cyanoacrylate glue, AKA "superglue"

## Post-Printing

Assemble the hub and blades with 14mm long 3mm cap screws and nuts. You may want to press the nuts in place using pliers. The hub halves have recesses for caps on one side & nuts on the other. Screws will pass through the holes in the blade root. The hole inclination is consistent with the 35 degree pitch of the blade slots. Insert a 608RS bearing in one of the the hub centers before joining the halves.

Bolts need to sit at a right angle to their mounting depression. If needed, there is an alignment block to help with that (it may need the bolt hole opened a bit, haven't checked).

Fit the head of the 2" 5/16" bolt into the hex depression on the nose piece, gluing with CA glue. Follow up with a bolt lock piece (has a hex base) also using CA glue. This bolt will pass through the assembled hub & thread into the base piece. Pre-threading the base will ease final assembly. Spacer pieces should be used on the bolt as required to provide a gap between hub and nose/base pieces. I did use a small piece of aluminum tape as a shim to get a tighter fit on the bearing and reduce play.

The head of the 1 1/2" 5/16" bolt fits into the hex depression on the base piece. Glue into place with CA glue and a bolt lock piece, also CA glued.

The stake mount is intended to hold two 608RS bearings. Use of two bearings reduces the potential for tilt/wobble of the base on the stake. You will probably need to use a small hammer (or some gentle heating) to help persuade the first bearing to get seated at the bottom of the opening.

The tail piece should be CA glued in place at the rear of the base as the last step.

## How I Designed This

This was done in TinkerCad.

<https://www.tinkercad.com/things/fytmHNbQ2vk>

Category: Outdoor & Garden

## Model files



**wind\_spinner\_v5-1\_35-a\_hub.stl**



**wind\_spinner\_v5-1\_35-b\_hub.stl**



**wind\_spinner\_v5-1\_35-ab\_dbl\_bearing\_hub.stl**



**wind\_spinner\_v5-2\_35\_sail\_blade.stl**

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**wind\_spinner\_v5-3\_tail.stl**

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**wind\_spinner\_v5-4\_base.stl**

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**wind\_spinner\_v5-5\_nose.stl**

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**wind\_spinner\_v5-6\_stake\_mount.stl**

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**wind\_spinner\_v5-7\_locks\_and\_spacers.stl**

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**wind\_spinner\_v5-8\_bolt\_alignment.stl**

## Other files



**errata.txt**

[Find source .stl files on Thingiverse.com](#)

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