



## Vertical Bubble Machine

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### Summary

This vertical bubble machine blows bubbles not horizontally, but upwards. I needed this for a project: a witch...

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This vertical bubble machine blows bubbles not horizontally, but upwards. I needed this for a project: a witch cauldron from which bubbles emerge, glowing in the dark by having UV-A LEDs at the edge of the cauldron and using a UV bubble fluid.

Normal bubble machines have to blow bubbles in a horizontal or nearly horizontal direction, because the bubble wheel has to be oriented horizontally, with the lower part in a tank of bubble fluid. I had different ideas to overcome this problem, and in the end took a "ferris wheel" like approach.

For building this, you'll need a small 5V geared motor and a 12V pc fan (I used a rather strong one and ran it on the same 5V as the geared motor that's turning the wheel). Just place the bubble machine into a tray containing the bubble fluid.

You'll find detailed instructions to building this in my "Magic Cauldron" instructable here: <http://www.instructables.com/id/Magic-Cauldron-Blowing-Glowing-Bubbles/>. See for yourself which of the connecting bubble wands you want to print -- just print eight of them and mix them as you

like. For my magic cauldron I used smaller ones, but when using just the bubble machine my kid's love the bigger ones very much.

Here's a video of the Vertical Bubble Machine in action: <https://youtu.be/LEh5ZPtCjE>

Here's a video of the "Magic Cauldron", for which it was built: <https://youtu.be/U5E8Jiy0ujM>

And here you can see an interactive rendering of the machine to better understand how it fits together: <http://a360.co/2aNOUte>

## Print Settings

### Printer Brand:

Ultimaker

### Printer:

Ultimaker 2

### Rafts:

Yes

### Supports:

No

### Notes:

This works without supports -- parts are oriented like in the Fusion360 assembled design, so for printing you'll have to reorient them to lie flat (e.g. rotate the wheels by 90° or the fan mount by 180°). On my brother's well calibrated UM2+ everything printed fine without using rafts; if you need a raft for the rather thin bubble wand parts, be careful when removing it. All parts are so flat that infill doesn't really matter.

Category: Mechanical Toys

## Model files



simplewheel.stl

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**bubblewand2.stl**

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**verticalbubblemachine.f3d**

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**wheel.stl**

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**fanholder.stl**

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**bubblewand3.stl**

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**sidewall.stl**

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**bubblewand4.stl**

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**stand.stl**

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**electronicsbox2.stl**

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**electronicsbox1.stl**

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**bubblewand1.stl**



**pinion.stl**



**funnel.stl**

## Other files



**vertical\_bubble\_machine\_drawing\_v1.pdf**

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

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