
ov Documentation

Release latest

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OpenVentilator

A 3D printable ventilator project

Few years ago, I had this weird vision of “Underwater Aquaman suits” and thought, hey that would be a cool idea. I made these really rough 3D models for what I envisioned, and wasn’t able to get much support. I later went on to an “original” plan of wanting to make 3D printed gills, but due to limited funding and resources, we all knew that wasn’t going to happen. Apparently, the world didn’t see my vision of a bunch of underwater “heros” in suits. I wonder why? Anyways, I heard about the need of ventilators and thought wow, no way I can contribute to something like that! Then I remembered this project, and I was like “oh wait!”, here we are now. . .

Code Life Challenge

[Material Guidelines](#)

[Product Requirements](#)

[Medical Device Compliance Requirements](#)

1.1 View #1

1.2 View #2

Model Embedded Code:

```
<div class="sketchfab-embed-wrapper">
  <iframe title="A 3D model" width="640" height="480" src="https://sketchfab.com/
↪models/c6e99560960948e2909178ea82b30da0/embed?preload=1&ui_controls=1&ui_
↪infos=1&ui_inspector=1&ui_stop=1&ui_watermark=1&ui_watermark_link=1
↪" frameborder="0" allow="autoplay; fullscreen; vr" mozallowfullscreen="true"
↪webkitallowfullscreen="true"></iframe>
  <p style="font-size: 13px; font-weight: normal; margin: 5px; color: #4A4A4A;">
    <a href="https://sketchfab.com/3d-models/special-project-
↪c6e99560960948e2909178ea82b30da0?utm_medium=embed&utm_source=website&utm_
↪campaign=share-popup" target="_blank" style="font-weight: bold; color: #1CAAD9;">
↪Special Project</a>
    by <a href="https://sketchfab.com/kamalandrew?utm_medium=embed&utm_
↪source=website&utm_campaign=share-popup" target="_blank" style="font-weight: bold;
↪color: #1CAAD9;">Andrew Magdy Kamal</a>
```

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```
on <a href="https://sketchfab.com?utm_medium=embed&utm_source=website&utm_
↪campaign=share-popup" target="_blank" style="font-weight: bold; color: #1CAAD9;">
↪Sketchfab</a>
  </p>
</div>
```

1.3 Recommended Components:

1. ARDUINO UNO R3 for Airway Control
2. Multi-Servo Motor Controls for Arduino
3. Arduino Pan & Tilt Mounting Kits
4. Airway filters, valves and Lung Bags
5. CPAP Hose Adapter and Mask Liner
6. Medical Air Pump device such as Airsense
7. If not medical airpump device, then airway controller + regular pump
8. Portable battery or power station type device (dependent on chosen components)

The above is the recommended components based off build estimates, and may or may not work. Professional experience is required for building such devices.

Please keep in mind:

1. Using a ventilator type device improperly can kill someone
2. We are providing this as a resource/repo, this isn't HIPAA Compliant
3. Any device used on someone must follow FDA regulations for approval in the US
4. Outside of the US, laws of your own countries are applicable
5. This is not meant to be taken as a serious resource but "as is".
6. Follow in your own risk, and assume this doesn't work
7. Medical devices should adhere to popular testing and specifications standards
8. We are not liable for any negative outcomes that result from usage of this repo

See Also:

- [Ventilator](#)
- [OpenVentilatorRegistry](#)
- [Open-Source Ventilator](#)
- [MIT Low Cost Ventilator](#)