



## Tools to ventilate multiple patients on the same machine

A Austin Quinn

VIEW IN BROWSER

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### Summary

These models are a set of tools to more safely ventilate multiple patients with the same machine.

[Healthcare](#) > [Home Medical Tools](#)

Tags: [mechanical](#) [healthcare](#) [ventilator](#) [coronavirus](#) [covid](#)

These models are a set of tools to more safely ventilate multiple patients with the same machine. While these have been tested on high fidelity mannequins at our simulation center, **THEY HAVE NOT BEEN TESTED ON PATIENTS. THEY SHOULD BE USED WITH EXTREME CAUTION AND ONLY AS A LAST RESORT, IF APPLIED CLINICALLY.** We will be publishing data on them in the coming days. Please see our video on youtube that explains how each works. <https://youtu.be/ikMGO74AoFY>

Briefly, the vent splitter allows two inspiratory circuits to be connected to the ventilator (in the case of our trials, an LTV 1200). The orifice plates allow you to titrate the peak pressure of one patient, by increasing resistance and therefore decreasing their peak pressure. The 4mm tube adder lets supplemental oxygen to be added to a patient's inspiratory circuit, allowing titration of their FiO<sub>2</sub>. The 4mm splitter is necessary to combine the expiratory circuits back to the machine.

Below is a link to documentation of the necessary steps/parts:

[https://docs.google.com/document/d/154kASLjKGEOrOMHB42PemU0Yc4BvV9fxo3m\\_gUyM-GM/edit?usp=sharing](https://docs.google.com/document/d/154kASLjKGEOrOMHB42PemU0Yc4BvV9fxo3m_gUyM-GM/edit?usp=sharing)

These pieces may not fit every ventilator/all tubing, so feel free to alter them as needed. Please reach out with any questions, thoughts, or improvements on this project.

austin.m.quinn.public@gmail.comv

## Model files



**orificeplate\_id8\_od22\_aa.stl**



**orificeplate\_id7\_od22\_aa.stl**



**orificeplate\_id6\_od22\_aa.stl**



**orificeplate\_id5\_od22\_aa.stl**



**orificeplate\_id4\_od22\_aa.stl**



**orificeplate\_id3\_od22\_aa.stl**



**orificeplate\_id2\_od22\_aa.stl**

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**venttotubessplitter\_id22\_od22\_aa.stl**

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**4mmtubesplitter.stl**

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**4mmtubeadder\_od22\_aa.stl**

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**orificeplate\_id8\_od22\_aa.3mf**

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**orificeplate\_id7\_od22\_aa.3mf**

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**orificeplate\_id6\_od22\_aa.3mf**

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**orificeplate\_id5\_od22\_aa.3mf**

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**orificeplate\_id4\_od22\_aa.3mf**

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**orificeplate\_id3\_od22\_aa.3mf**

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**orificeplate\_id2\_od22\_aa.3mf**

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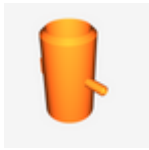
**venttotubessplitter\_id22\_od22\_aa.3mf**

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**4mmtubesplitter.3mf**

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**4mmtubeadder\_od22\_aa.3mf**

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