**Open Source Ventilator**

**Inspiration Module**

V1.0; Sem Lampotang, March 17, 2020; Department of Anesthesiology, Center for Safety, Simulation & Advanced Learning Technologies, University of Florida, Gainesville, Florida, USA

The inspiration module delivers gas to the patient during the inspiratory time Ti. The inspiration valve closes during exhalation.

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| **Physical Input** | **Data/Control Input** | **Physical Output** | **Status** |
| **Design A (100% O2)**  Oxygen at 50 ± 5 psig (345± 35 kPa) | Time inspiration should be on  Time inspiration should be off | O2 flows towards patient at a given flow rate during the selected inspiratory time to deliver the desired tidal volume  In a constant flow inspiration, the flow rate is VT/Ti l/s | Not claimed; No one working on it yet |
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| **Design B (21%-100% O2)**  Oxygen at 50 ± 5 psig (345± 35 kPa)  Air at 50 ± 5 psig (345± 35 kPa) | FiO2 level selected by user  Time inspiration should be on  Time inspiration should be off | Gas at desired FiO2 flows towards patient at a given flow rate during the selected inspiratory time to deliver the desired tidal volume  In a constant flow inspiration, the flow rate is VT/Ti l/s |  |
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| **Design C (room air)**  **Mechanically actuated self-inflating bag (aka “Ambu” bag)** | Time inspiration should be on  Time inspiration should be off | Air flows towards patient during the selected inspiratory time to deliver the desired tidal volume | **URLs** |
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