

**Proposals on Product Development towards Combating COVID 19 Outbreak
An Initiative from IIT Kharagpur**

Category: Medical Equipments / Robots; Testing Kit

Title: Bootstrapping the ambu-bag as automated ventilator

Expected Outcome: Ambu-bag based ventilator with the following features:

- 3D printable mechanical pressing design
- Sterilizable outer shield
- Alarm in case of emergency
- Adjustable BPM (Breaths per minute) : 8-40BPM
- Adjustable I/E ratio (inspiratory/expiratory time ratio) : 1:1 - 1:4*
- Proper documentation and video tutorial for the assembly of parts and usage of the device using our own prototype

Expected Timeline: 6 Weeks

Remarks: Funding required Rs. 20 Lakh

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