

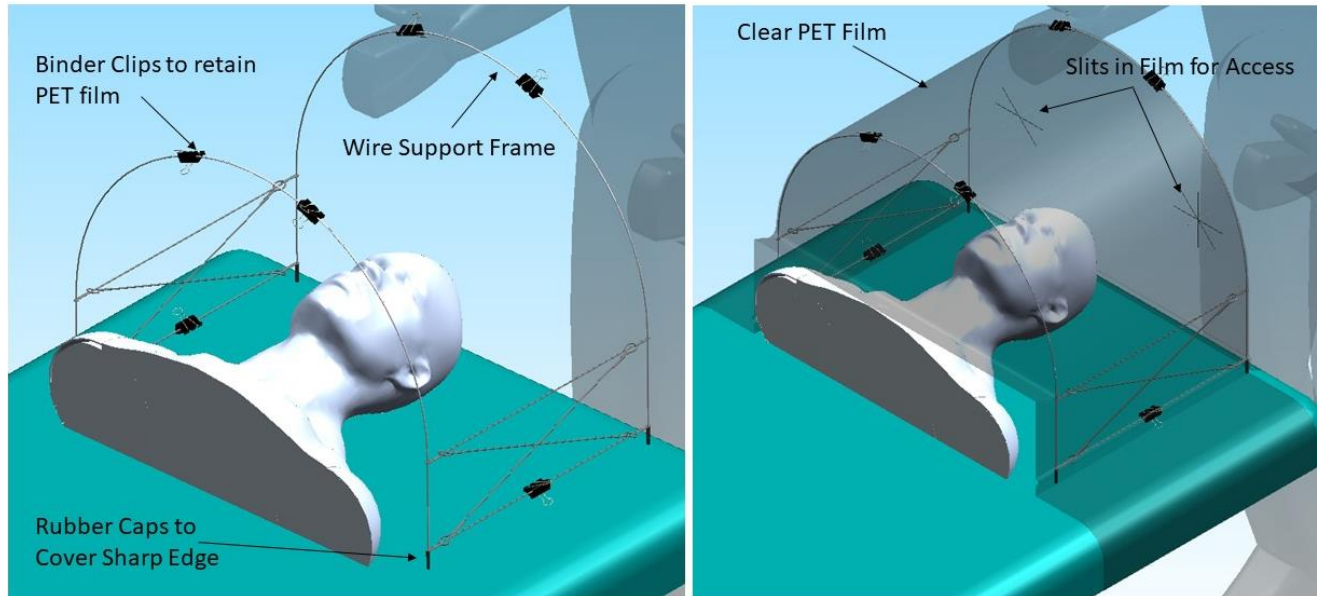
Intubation Protective Box Ideas

Manufacturing Feasibility

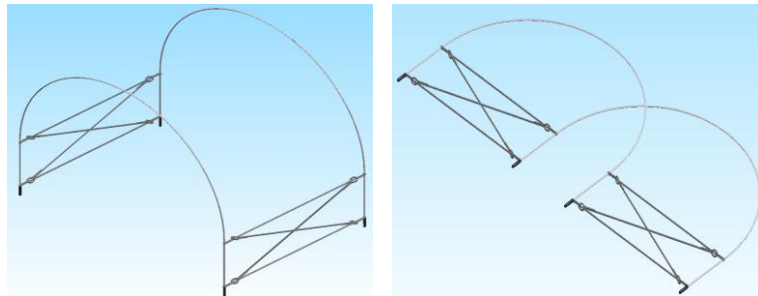
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INTUBATION WIREFRAME TENT – FEASIBILITY ASSESSMENT

Goal – Design a semi-circular intubation tent using steel wireframe support to protect doctors and medical professionals from respiratory droplets, cough or aerosol spray during intubating patients infected with Covid-19



- Raw materials are very **cheap and readily available** from local vendors
- Assembled unit **folds flat for ease of shipping and storage**
- Final product to be shipped from JDC w/minor assembly to be completed at the receiving location
 - More flexibility given by the binder clips as the **PET film can be recycled** after every patient



Material / Cost per unit: \$25

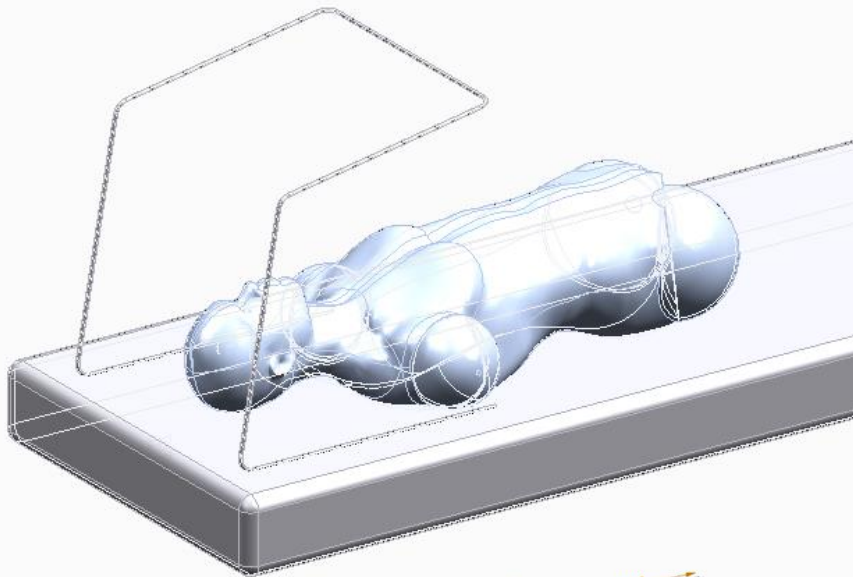
- 22 ft. of 12 ga. Wire (8 cents/ft) = \$1.76
- 4 Rubber Caps (9 cents each) = \$0.36
- 6-10 Binder Clips (14 cents each) = \$1.40
- 5*5 ft of 0.030 PET film (\$6 for 1000 sq inch) = \$21

Build Rate:

JDC can build approximately 100 base wire frames/day

INTUBATION STEEL FRAME TENT – FEASIBILITY ASSESSMENT

- **Goal** – Design a intubation tent using steel wireframe support film to protect doctors and medical professionals from respiratory droplets, cough, or aerosol spray during intubating patients infected with Covid-19



- ❑ Very **easy to procure raw materials** at JDC from our regular suppliers
- ❑ Stainless steel wire rod frame enables –
 - **Easy production** just by making 6 bends
 - **Rigidity** to the structure
 - **Easily cleanable**
- ❑ PET film is easily **replaceable** as it is attached by binder clips
- ❑ Units nest well allowing **easy shipping** to the target location

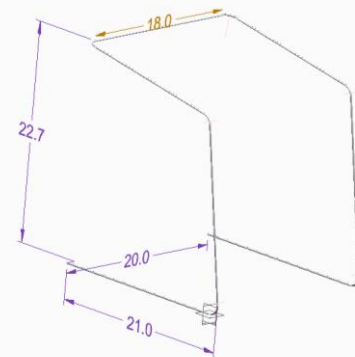
Material / Cost per unit: \$35

- 11 ft. of 1/4" Stainless Steel Rod = \$11.05
- 6-10 Binder Clips (14 cents each) = \$1.40
- 5*5 ft of 0.030 PET film (\$6 for 1000 sq inch) = \$21

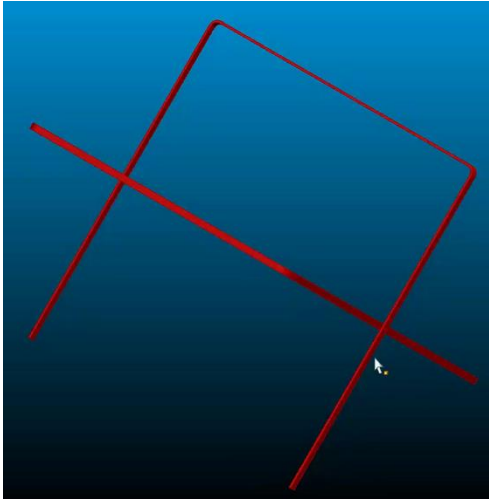
Build Rate:

With the help of a small hand bender, JDC can build approximately 150 base frames/day (can be increased with increased personnel)

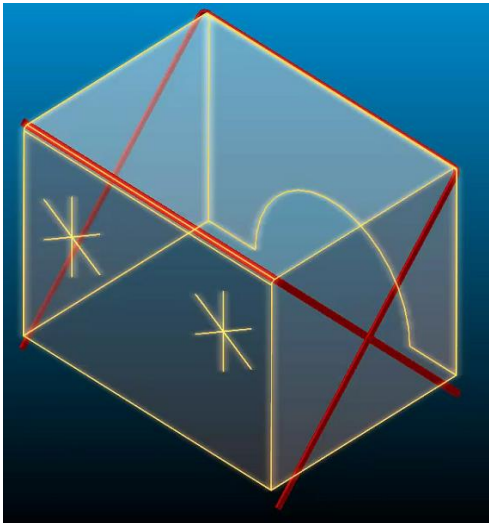
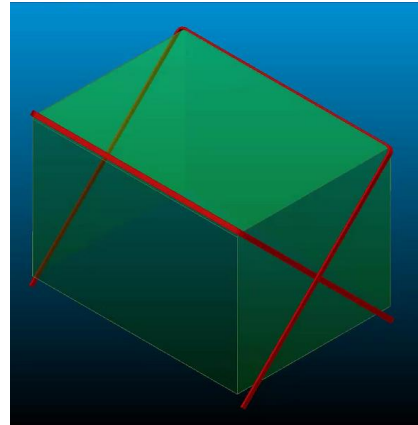
Film would be draped over the frame to protect health workers



INTUBATION FOLDABLE BOX– FEASIBILITY ASSESSMENT



Goal – Design a intubation foldable box with plastic sheet wrapped around it to protect doctors and medical professionals from respiratory droplets, cough, or aerosol spray during intubating patients infected with Covid-19



- Leverage - Expertise of the MEG in the machine shop at JDC
- Very **easy to procure raw materials** at JDC from our regular suppliers
- Foldable stainless steel frame enables –
 - **Easy shipping:** less storage space required
 - **Rigidity** to the structure
 - **Easily cleanable** as the plastic film is attached to the inside of the frame using two-sided tape/Velcro
- PET film is easily **replaceable**

Material / Cost per unit: \$35/piece

- Frame: \$15/piece
- 5*5 ft of 0.030 PET film (\$6 for 1000 sq inch) = \$21

Build Rate:

JDC can build approximately 100 base wire frames/day