

COVID-19 DESIGN INNOVATION GRANT

“HEXA POD”

Unit Description

- Hexagonal pod can be placed wherever needed.
- The modular unit is customizable, it is designed for those with COVID-19 symptoms to work as live/ work isolation pod providing safe and comfort environment.
- Later, it can be used as a private office, an additional room, or a completely-equipped small home.
- It's a multipurpose furnishing system composed from a series of units with the same section and variable areas, containing all the elements required for living in a minimum space.
- The modular system can adapt to user needs, from living systems (sleeping, relaxing, adjustable work space) to kitchenette and washroom, it is also customizable in size and function.
- Leaving as much flexibility to select between various units' design and multiple configurations as possible.

Material and Fabrication

- The prefabricated units are made of lightweight metal frames, clad with aluminum sheets.
- The units that form the pod stack together via magnetic locks, to connect various alternatives together, and this will vary depending on the users needs.

Unit Measurements

- With a total of 19-square meter for the three modular pods added together (7 square meter living space pod + 4.8 square meter Kitchenette pod + 4.8 square meter washroom pod).
- The modular unit can be extended and added to as needed.

Costs

- Costs can start at \$1,000 based on the choices and the unit selected.

Sustainability

- The unit is environmentally friendly, when reaching the end of its life cycle, aluminum sheets and the metal frames can be transferred as desired and recycled.
- Windows maximizing daylight as a sustainable energy efficiency strategy.
- Rooftop solar panels can also be supplied to produce renewable energy when placed outdoor.

Design Consideration for Infection Control

- Trolley outside the pod (movable Tray) can be reached through a window for passing food and patient's needs (To avoid direct contact with patient).
- Aluminum sheets / panels for interior and exterior cladding (Corona virus lasts on aluminum from 2-8 hours in compare to other materials that lasts on them around 5 days).
- Hand Hygiene supplies outside the isolation pod and handwashing facilities inside the pod(To reduce the spread of COVID-19).
- Touch - free bins (for infection control).
- Negative pressure unit to allow air flow into the isolation pod ensuring good ventilation (studies indicated that people may acquire Corona Virus through the air).

Technical Information provided by Dr. Azmy Allam (OWOSSO MEDICALGROUP)

We have been in contact with Dr. Azmy A. Allam from Owosso Medical Group, Owosso, Michigan, USA, to discuss the required technical standard for COVID-19 isolation rooms throughout a medical stand point.



Based on our discussions he kindly provided us with a number of research papers and information.

Consequently we have developed our ideas to match the recommendation in the paper findings.

Finally Dr. Allam was impressed by our design development and progress.

Kindly find an excerpt of the emails between Dr. Azmy and I concerning the proposed project.

Our email requesting feedback regarding our proposed design

On May 11, 2020, at 10:16 AM

Dear Dr. Azmy,

I hope you and your family are well and fine.

Kindly find the attached design proposal and description regarding the isolation pod discussed on our last call.

I really appreciate your time and the information you provided that helped a lot in the design process and consideration.

Looking forward for your feedback.

Thanks again for your time, effort and support.

Kind regards,

May

Technical Standard approved by Dr. Azmy Allam (OWOSSO MEDICAL GROUP) and his feedback regarding the proposed design

On May 12, 2020, at 12:56 PM, Azmy Allam <azmyallam@me.com> wrote:

I'm very impressed with your work and looks perfect from the medical point of view.

Respectfully,

Azmy Allam, MD, FACP, FCCP, DABSM

President & CEO

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