

# COVID-19

## INFECTION PREVENTION AND CONTROL

## INTRODUCTION

**Starn Group is a safety-focussed Global network of companies with operating hubs in the UK, USA, Canada, Australia, the Middle East and Malaysia.**

As a business with a reputation for problem-solving, we believe that our extensive experience in rapid deployment shelters, electrical, ventilation and atmospheric control systems and our established supply chain, will allow us to support the global fight against Covid-19.

### THE PRODUCTS WE SEE AS BEING OF ASSISTANCE INCLUDE:

- 1. Emergency Response Shelters – large rapidly deployed inflatable-column emergency response shelters manufactured in Canada by our group company, Dynamic Air Shelters.**
- 2. Portable Anterooms – using our expertise in creating positive pressure chambers for the energy services industries. We have applied our technology to develop portable anterooms allowing us to convert existing rooms into Negative (or positive) Pressure Isolation Rooms (NPIR)**
- 3. Negative Pressure Isolation Enclosures – a repurposing of our existing equipment to provide modular Negative Pressure Isolation Chambers**
- 4. Ventilation and Pressure Control Systems – combined with the above products.**

Guided by a range of standards and guidelines, we have researched the International health sector's recommendations for COVID-19 infection prevention and control and the requirements for NPIRs.

**We understand that the health system will come under significant strain and we would like to provide whatever assistance we can.**

We do not profess to have all the answers; we want to better understand the needs of the health sector so that we can further adapt our technology and use our resources to rapidly deliver optimised solutions.

In addition to supporting metropolitan health services, we are particularly keen to use our products and services to provide support to vulnerable communities.

We also see our initiatives as helping to support employment during what is an economic as well as public health crisis.

*We have been working with our supply chain, and investigating contingency options, to ensure we have continuity of supply for key equipment and materials. (e.g. HEPA filters, PVC fabric, HVAC, ventilation and electrical equipment, steel, fabrication & manufacturing capacity).*

**EMERGENCY RESPONSE SHELTERS**

- Manufactured in Canada. Deemed as an essential product by the Canadian Government so there will be no interruption to supply
- Key components supplied out of Canada (shelter, lighting, inflation system, anchoring straps)
- Ancillary components sourced locally (power supply, HVAC, flooring, NP air-handling/HEPA filtration)
- Rapidly deployed – the fastest and easiest way to create large sheltered areas
- Integrated HVAC systems allow for cooling or heating of entire structure
- Lead times vary by size – smaller shelters are much faster to manufacture approx. 2-3 days per 14.0m x 14.0m x 5.5m shelter
- Can be air-freighted
- Can be installed on a range of surfaces with a small team (approx. 4-6) e.g. carparks, sporting grounds, parklands etc
- Weather-proof - 130km/h wind load rating as standard (up to 209km/h can be optionally specified)
- Available in a range of sizes

SIZE	INTERNAL AREA	ESTIMATED BEDS
6.7m x 22.0m x 3.6m	108m <sup>2</sup>	22
14.0m x 14.0m x 5.5m	129m <sup>2</sup>	24
14.0m x 20.0m x 5.5m	220m <sup>2</sup>	40
14.0m x 29.0m x 5.5m	311m <sup>2</sup>	60

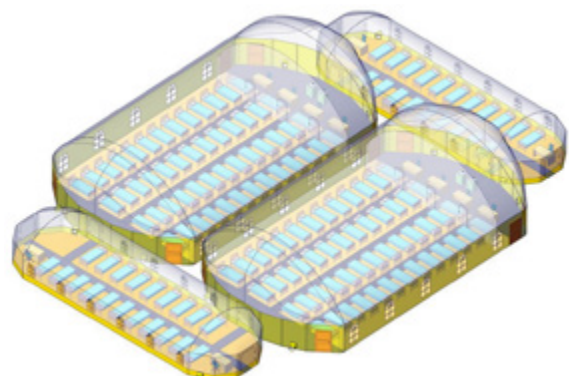
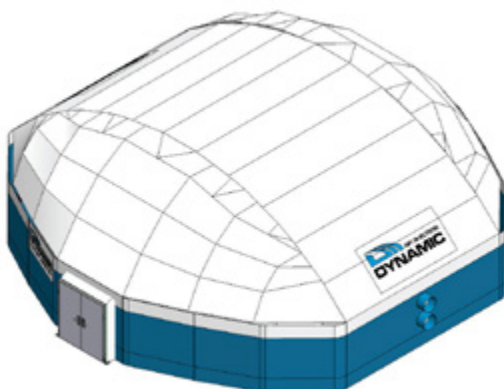
\*Additional sizes available upon request

**PROPOSED USES INCLUDE:**

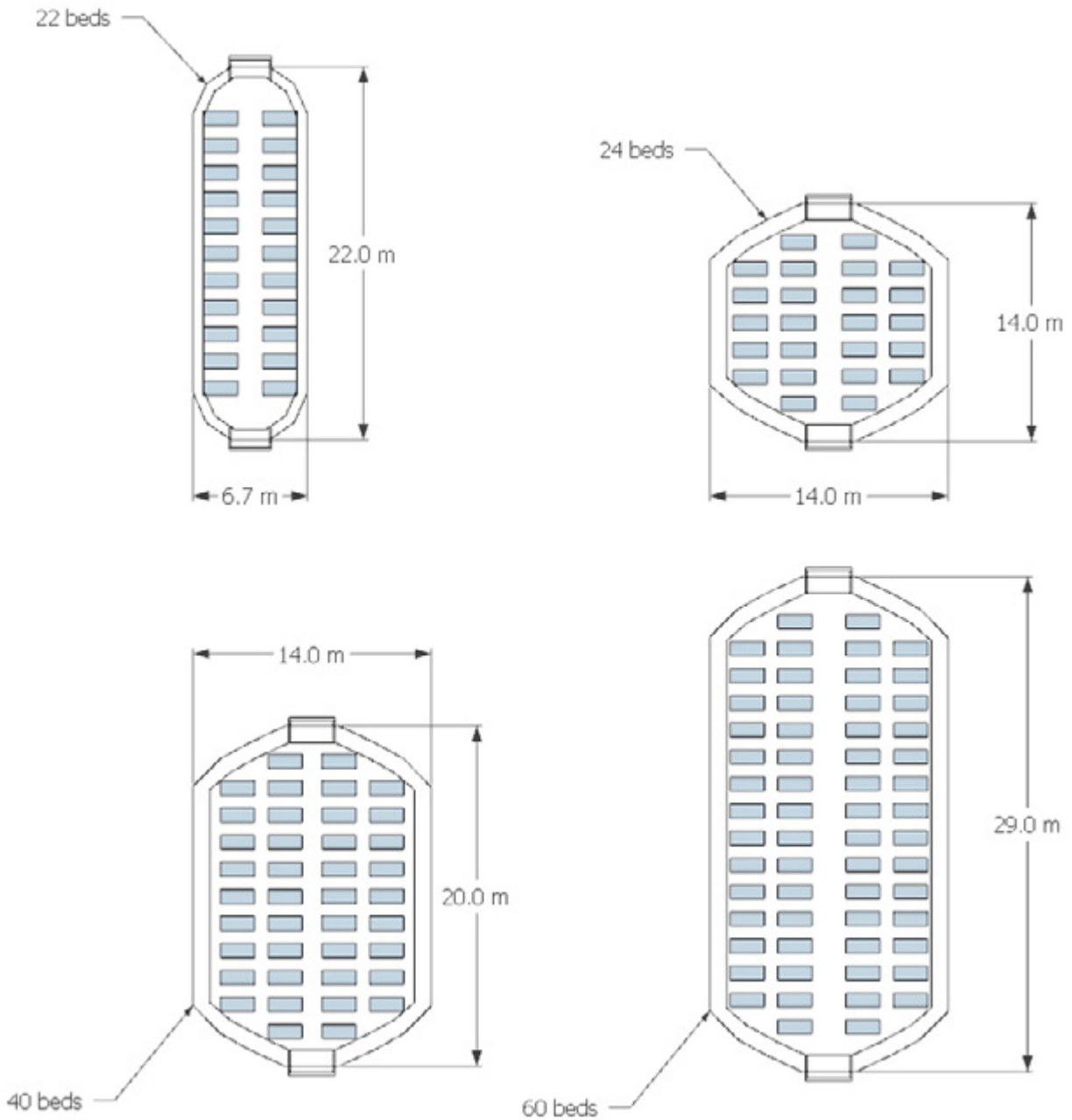
- Expanding hospital ICU capacity
- Providing temporary triage and testing clinic facilities to alleviate pressure on emergency departments, control the spread of infection by providing a ‘filter’ into hospitals
- Providing remote community isolation accommodation and/or treatment facilities for confirmed cases

**CAN PROVIDE NPIRS BY:**

- Using large air-handling units to negatively pressurise the entire space (for cohorting)
- Building temporary rigid/conventional rooms within the space and providing single or multiple occupancy NPIRs using our ventilation/pressure control systems
- Building Safehouse negative pressure isolation enclosures within the space (including custom ‘single piece’ designs)



**EMERGENCY RESPONSE SHELTERS**



\*based on field hospital bed size of 840mm x 2000mm with spacing of 760mm

### PORTABLE ANTEROOM

- Has the capability to rapidly turn any standard size room into a Class-N or Class-P NPIR or PPIR
- Can be designed and manufactured to suit any door size or functional requirement, including hospital doors (i.e. can be designed to allow for gurney/wheelchair access and to suit any internal space/use requirements – e.g. donning/doffing PPE etc)
- Provides negative pressure at minimum -30 Pa (or positive pressure at minimum +30 Pa)
- Provides airflow minimum of 12 air changes per hour or 145L/s for each occupant
- HEPA (H14) ventilation system can be scaled to suit room size
- Simple and rapid installation
- We will remain on call to provide technical support 24/7 as required

### PROPOSED USES INCLUDE:

- Converting Class-S (Standard) hospital rooms into Class-N NPIRs to increase ICU capacity
- Converting hotel or other temporary rooms into Class-N NPIRs



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**NEGATIVE PRESSURE ISOLATION ENCLOSURES**

- Modular and scalable
- Rapidly deployed
- Indoor use only (i.e. not waterproof)
- Uses existing equipment
- Custom designs available (e.g. large, rapidly deployed single piece enclosures, gurney entrance airlocks etc)

**PROPOSED USES INCLUDE:**

- Providing additional Class-N NPIRs to increase ICU capacity





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