# U.S. Army CASEVAC Pod

## TB2 Aerospace - Casualty Evacuation Pod

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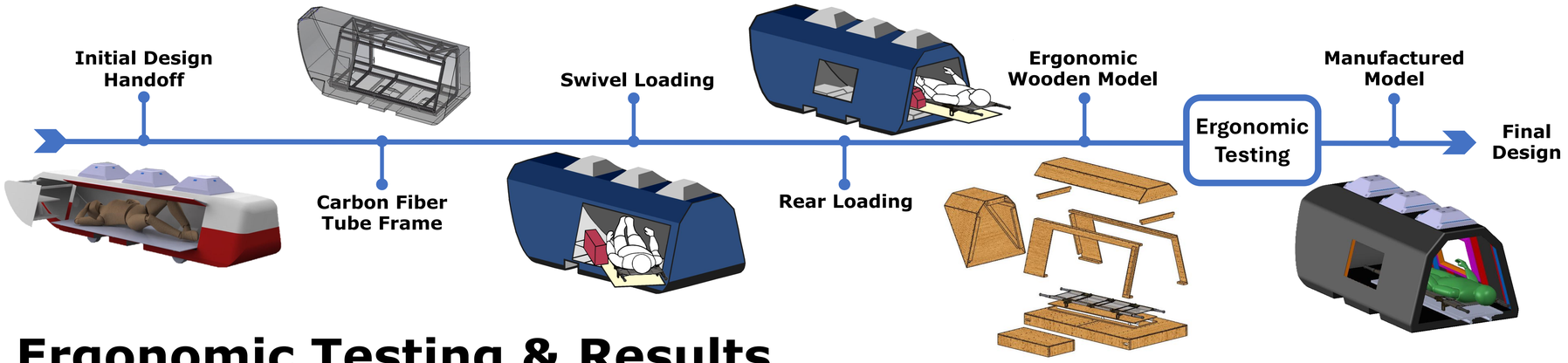
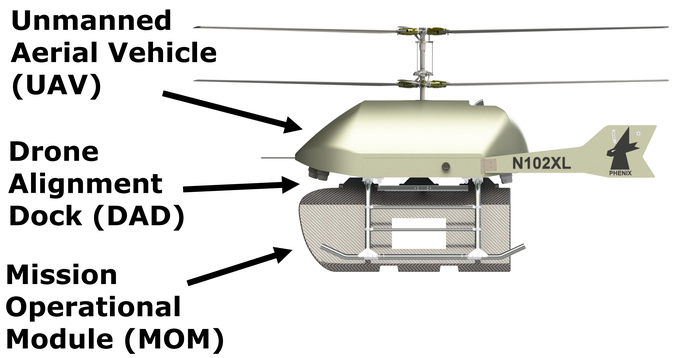
## Mission

**Objective**: Design an unmanned and autonomous casualty evacuation (CASEVAC) Pod to minimize medical and military personnel exposure during the evacuation of wounded warfighters.

Integrated the TB2 DROPS system into the design framework. Partnered with the U.S. Army to evaluate equipment layouts and loading methods. Results directly informed the final structural design and interior configuration.




## Requirements

- ☑ Less than 800 lbs.
- ☑ Hold 6'2" 250 lbs. male with 30 lbs. of equipment
- ☑ 1.5-hour Pod battery life
- ☑ Ability to lift Pod with forklift
- ☑ Hold required medical equipment
  - Vitals monitor & ventilator
  - Blood warmer & cooler
  - IV pump

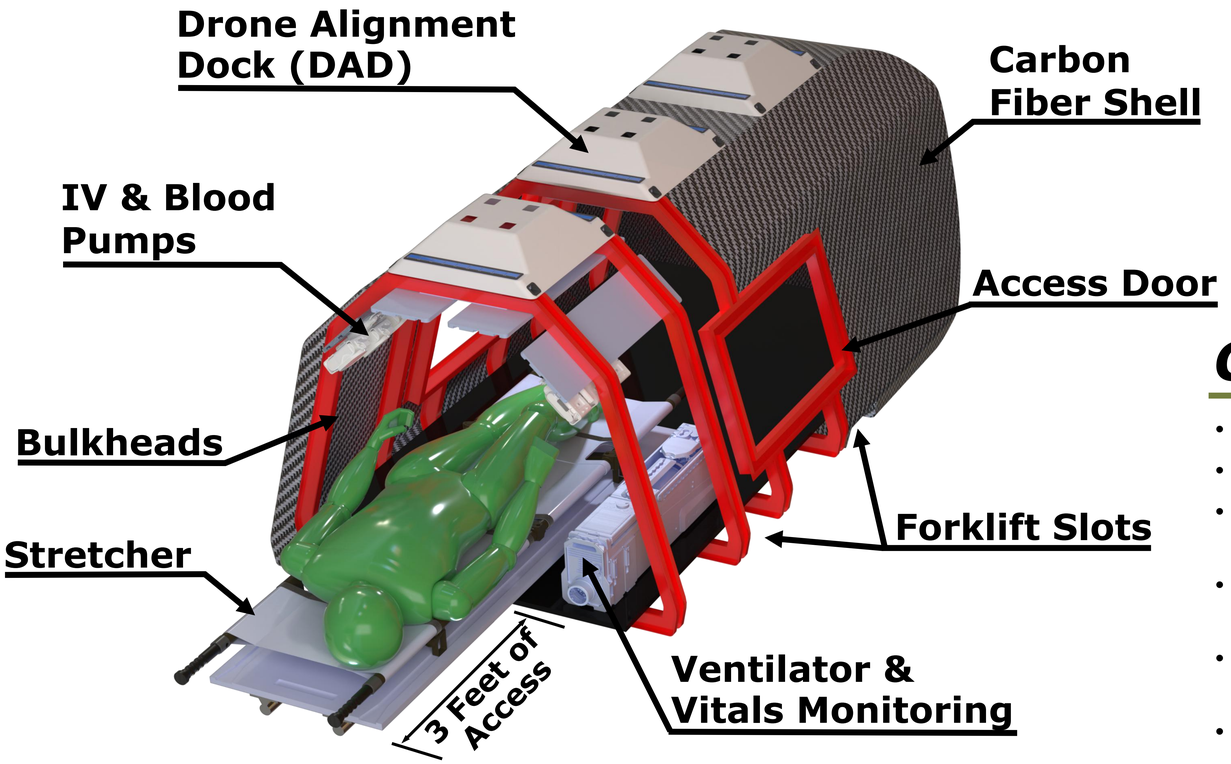
## Final Specifications

**Weight:** 786 lbs.
**Internal Dimensions:** 4’3"(W) x 3’3"(H) x 8’8"(L)
**Battery life:** 2.2 hours
Universal mounting system for medical equipment (FAA Rated)

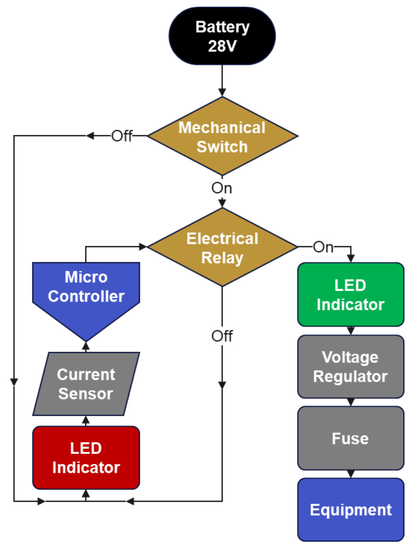
## Ergonomic Testing & Results

- **Goal:** Determine medical equipment layout and optimal patient loading
- Maximize loading efficiency and patient access
- Interviewed medical crews and emergency medical professionals
- Rear Pod loading had quicker loading and better access to patient
- Modular medical equipment layout implemented with the Ferno Track system
- 17"x28" side access doors to fit a person
- Shrunk width by 2” and height by 6” to accomplish 8.5% weight savings

## Design




## Power System




## *CASEVAC V2.0*

- Destructive structural testing
- Retrofitting for alternative mission sets
- Investigation into redundant attachment system into DAD’s
- Design of a docking wireless charging system
- Implement system wide ballistic tolerance
- Next generation nose-cone modularity

DESIGN CENTER COLORADO

**Special Thanks**: Hank Scott, Daria Kotys-Schwartz, Julie Steinbrenner, Victoria Lanaghan, Paul Brayford, Matt Harmon (Zoll Medical), Quickstep Group, CU Combat Research Group, Center for Military Medicine Research (University of Pittsburgh), Idea Forge Staff