

Heated Boot Liners for Extreme Cold

Military operations in cold weather require warfighters to use protective garments to prevent frostbite. Current state-of-the-art flight boots do not meet extreme cold weather requirements, due to restricted foot space in and around aircraft. Consumer-grade heated products do not provide frostbite protection in extreme cold, lack a robust domestic supply chain, and use batteries intolerant of extreme cold temperatures. For DoD, frostbite protection is essential to operate and succeed in diverse cold weather environments. CRG, EXO2, and Clemson Textiles have created a boot liner that provides warmth and frostbite protection down to –49°F.

The safe, slim, conformal liner can be worn with existing boots.



Frostbite Protection

Provides hours of frostbite protection for temp down to -49°F, expanding mission capability in extreme cold and arctic environments



Autonomous Operation

Automatically provides heat only when cold temperatures are detected



Slim, Conformal Fit

Boot liner material is comfortable, flame-resistant, and made from Berry compliant fabrics



Rugged Heating Elements

Materials made with flexible, stretchable heating elements that are shockproof even when torn



Boot Compatibility

Improves existing boots' utility in extreme cold and maintains existing supply chain



Washable

Worn over socks to reduce laundering requirements; can be hand washed and hung to dry

Help Reduce the Risk of Frostbite

via a safe, slim, conformal liner for aviation boots



Boot Liners Status:

Technology Partner:



Technology Readiness Level:

Manufacturing Readiness Level:

Initial Field Testing:

Lab Testing Results:



February & March 2023

Cold environmental chamber testing indicates protection down to -49°F, a significant improvement over currently issued cold weather boots

* = anticipated TRL/MRL for early 2023

For more information:

Contact us at sales@crgrp.com

