



Lightweight, Small Volume CO₂ Removal Technology

- Current Status:
 - Existing underwater breathing apparatus (UBA) systems (Mk 25 and Mk 16) have an absorbent volume between 2.9 and 4.0 liters.
 - The ratio of CO₂ volume absorbed to absorbent volume (VRCO₂) at 21°C for each of these systems is VRCO₂=120.
 - As the temperature decreases, present systems remove less CO₂.



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- **Where We Want to Be:**
 - CO₂ removal technologies that can meet or approach a performance objective of 240 VRCO₂ over a temperature range of 2°C to 35°C and demonstrates equivalent or decreased breathing resistance as current systems.

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