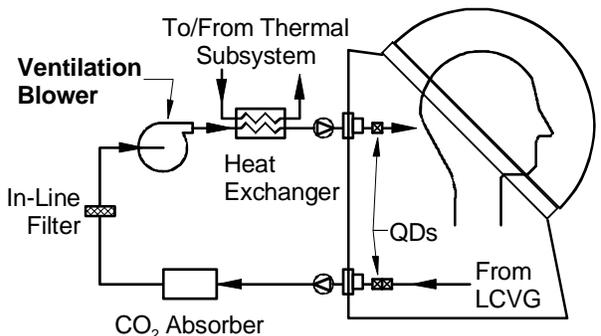


BRIEFING CHART

<p>NASA SBIR/STTR Technologies Compact, Efficient, and Reliable Ventilation Fan for EVA Suits PI: Dr. Michael G. Izenson/Creare Incorporated, Hanover, NH 03755 Proposal No.: 08-X5.03-9734</p>	
<p><u>Identification and Significance of Innovation</u></p> <ul style="list-style-type: none"> • Ventilation fan for exploration space suits <ul style="list-style-type: none"> – Departure from the combined fan / pump / water separator used in the Shuttle EMU • Challenging requirements: <ul style="list-style-type: none"> – High ΔP to force air through several components – Highly reliable and easy to repair – Compact and efficient • Propose to develop an innovative blower • Novel design provides high head at low rotating speed <p><u>Expected TRL Range at end of Phase II</u> <u>Contract: 6</u></p>	 <p style="text-align: center;"><u>Conceptual Fan Design</u></p> <p>Flow: 5.9 ft³/min Speed: 4300 rpm ΔP: 3.3 in. H₂O Mass: < 500 g Power: 7.1 W Size: \varnothing 4.8 x 2.0 in.</p>
<p><u>Technical Objectives</u></p> <ul style="list-style-type: none"> • Meet specs for Constellation Space Suit ventilation subsystem • Compact, lightweight, efficient • Low speed for high reliability <p><u>Work Plan</u></p> <ul style="list-style-type: none"> • Determine design specifications • Demonstrate blower performance • Design Phase II prototype 	<p><u>NASA Applications</u></p> <ul style="list-style-type: none"> • Constellation Space Suit • Larger versions for vehicle ventilation subsystems <p><u>Non-NASA Applications</u></p> <ul style="list-style-type: none"> • Ventilation for soldiers wearing chem/bio protective suits • Nuclear, chemical, Hazmat workers <p><u>Contacts</u></p> <p>Mike Izenson, mgi@creare.com, 603-640-2405</p>