'Desert Seal' is a tent designed for the extreme environment of the desert. By taking advantage of the daytime heat gradient of arid regions, fresh air is drawn inside by an electrical fan placed at the top of the tent which is powered by a flexible solar panel installed across its exterior face. The overall shape is informed by aerodynamic considerations and allows users to enter in a standing position. Air-filled columns ensure stability in the event of wind and the special silver fabric protects the interior space from the sun.
009 Desert Seal

- CLIENT: European Space Agency (ESA)
- BACKGROUND: A technology-transfer study concerning the application of inflatables in hot arid regions
- OBJECTIVES: Use locally available resources and energy to provide cooling in a light-weight tent structure
- CONCEPT: Introduce a vertical element, to catch cool air from higher levels
- MATERIALS: PU-coated polyethylene, aluminum coated polyester
- STRUCTURE: A-shape vertical structure with air beams
- TECHNOLOGIES: Parachute sewing and emergency inflatables technologies
- OPERATION: A solar panel charges a battery pack, powering the fan and LED lights
- WIND RESISTANCE: 100 km/h (estimate)
- ASSEMBLY: 10 minutes, 1 person
- DIMENSIONS: Prototype 2.35 x1.25 m, h 2.26 m
- WEIGHT: 5 kg

- CREDITS

- DESIGN TEAM: Architecture and Vision - Arturo Vittori & Andreas Vogler
- PROTOTYPE: Aero Sekur, Aprilia, Italy
- SUPPORT: Roberto Vittori, European Astronaut Corps, Cologne, Germany; VHF-Technologies SA, Yverdon-les-Bains, Switzerland; ESA Technology Transfer Office, Noordwijk, The Netherlands; Museum of Modern Art, New York, New York, USA
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