

# MACS / pNeutron S

Rugged Quality

## Built for Action - to US Army Air Worthiness Standards



You need life support devices that function first time and every time – dependable, accurate and ready for action. The pNeutron model S ventilator and MACS CPAP System are built tough to handle the day to day abuse taken by EMS equipment. So rugged, they withstand the tests required for the US Army Air Worthiness Certification\*. These tests represent the harshest tests for any product.

### The Temperature / Humidity Tests:

- Operate for 4 hours in following ranges
  - a. -26 degrees C (-15° F), humidity between 5% & 95%
  - b. 60 degrees C (140° F), humidity between 40% & 70%
- Storage for 6 hours in following ranges
  - a. -46 degrees C (-51° F), humidity between 40% & 95%
  - b. 71 degrees C (160° F), humidity 95%

### The Altitude Tests:

- Operation test
  - a. Operate in chamber at 15,000 ft for 30 minutes
  - b. Change pressure to ambient at 2,000 ft / min
- Explosive decompression (pNeutron S)
  - a. Place in chamber at 8,000 ft for 10 minutes.
  - b. Drop pressure to 45,000 ft within 1 second

### The Vibration Tests:

- Sinusoidal vibration - applied in each of 3 mutually perpendicular axes
  - a. Frequency range: 10 to 1,000 Hz
  - b. 1 octave per minute at 5 g's in each axis
- Random vibration, wide band - applied in each of 3 mutually perpendicular axes
  - a. Frequency range: 10 to 2,000 Hz
  - b. 30 minutes in each axis at 3.54 g
- Bump test
  - a. 4,000 shocks, peak acceleration: 15 g
  - b. Duration: 6 msec, pulse shape: half sine
- Free fall - drop from 1 meter to a concrete floor - test on all 6 surfaces

\* Based on US Department of Defense Standard MIL-HDBK-516, October 2002



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