

# NASA TECH BRIEF



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## Self-Inflating Lifevest Stores in Small Package

### The problem:

To design an emergency lifevest that can be stored as a compact lightweight package and quickly inflated to support a person in the water.

### The solution:

A lifevest that can be inflated with carbon dioxide from a self-contained cartridge in 10 seconds. When deflated, this lifevest fits into a package occupying less than 20 cubic inches and weighing less than 1 pound.

### How it's done:

Prototype models of this lifevest were constructed from nylon with a neoprene coating. Its inflated configuration is maintained by internal V-shaped restraints. The carbon dioxide cartridge and triggering mechanism are built into the lifevest and provide an inflation pressure of over two pounds per square inch. An oral inflator is also provided to maintain or increase the pressure.

The lifevest is designed to fit across the chest and around the arms and shoulders of the wearer. To

employ the lifevest, the person need only trigger the internal inflating mechanism by squeezing the package at an indicated point.

### Notes:

1. This device should be of interest to manufacturers of marine sporting equipment and to amateur and commercial boat operators.
2. Inquiries concerning this invention may be directed to:

Technology Utilization Officer  
Manned Spacecraft Center  
Houston, Texas, 77058  
Reference: B66-10184

### Patent status:

This invention is owned by NASA, and a patent application has been filed. Royalty-free, nonexclusive licenses for its commercial use will be granted by NASA. Inquiries concerning license rights should be made to NASA, Code GP, Washington, D.C., 20546.

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