

HOW IT WORKS

The DRONE-RETRIEVER contains 7 critical components

1. Enclosure
 - a. Bottom of enclosure is designed to be mounted to the drone.
 - b. Contains the airbag and provides connection to the automatic inflator.
 - c. Contains four slots that allow for a mechanical strap or ziptie to pass through the enclosure for additional mounting options
2. Airbag
 - a. Orange inflatable water proof bag that inflates to provide buoyancy to bring drone to the surface after a water contact event
3. Automatic Inflator
 - a. This device has three sections.
 - i. A spring loaded activator is located inside the clear plastic section. When a trigger bobbin is inserted into the inflator and the Clear section is screwed down, the internal spring is compressed and held ready to strike an internal plunger.
 - ii. The internal plunger will push a spring loaded pin into the CO2 cartridge allowing the CO2 to escape the cartridge and pass into the manifold and fill the airbag.
 - iii. The third section is the threaded section with O-ring seal that allows the CO2 Cylinder to seal into the automatic inflator.
 - b. The clear plastic end has a "RED" painted spring and a "GREEN" sleeve inside.
 - c. When the "RED" is visible the activator has been discharged or the Trigger Bobbin is missing.
 - d. When the "GREEN" is visible the activator is charged and ready for use.
4. Trigger Bobbin
 - a. This device is the trigger device. It contains a special white pharmaceutical grade Microcrystalline Cellulose material that retains 8 plastic fingers that hold the spring load plunger under compression.
 - b. When the trigger bobbin contacts water the white material dissolves within 5 seconds allowing the plastic fingers to move outward and the plunger under compression to release and strike the activator plunger which instantly punctures the CO2 cartridge filling the airbag within 1 second.
5. CO2 Cartridge
 - a. DR-9 [8 gram Cartridge: Lifts up to: 9 lbs – 4kg]
 - b. DR-12 [12 gram Cartridge: Lifts up to: 15 lbs - 6.8 kg]
 - c. DR-16 [16 gram Cartridge: Lifts up to: 18 lbs - 8.2 kg]
 - d. **DANGER:**
 - i. **Never use a larger size CO2 cartridge as upon deployment it will burst the airbag causing the drone to sink.**
 - ii. **Never store Drone Retriever where the CO2 cylinder will be exposed to direct sunlight in an enclosed vehicle as temperatures in excess of 120° F - 49°C could cause the cylinder to vent thus activating the Drone Retriever. The cylinder will NOT explode.**
6. Dual Lock
 - a. Mushroom style plastic fastener with VHB (Very High Bond) adhesive.
 - b. Used to attach the Enclosure to the drone.
7. Ziptie
 - a. 15" - 38cm Re-leasable attachment strap to insure that the Drone Retriever unit stays on the aircraft during a violent water impact.

CAUTION: Both Dual Lock and Ziptie mounting systems must be employed.