

BIG AIR

Sports

issues in parachute valves in the leading edge valve parachute flying in ram air are very similar to airlocks made in

Design of the Valve

I was spiraling toward the earth with an airlock canopy that collapsed. There was enough inflated nylon on my head to slow my fall, but when a wheel of air for minutes I explored the many valves: "Gate" as much as possible. The "Gate" valve, sealing against the

Discussion

Despite the availability of information about the advantages of the airlock design, many people still think of the ram-air parachute as a "wait and see" approach. The first thing we must understand is that

Primary Stability

First thing is that many believe that the ram-air parachute is inherently stable. This is not necessarily true. The primary stability of a parachute is determined by its ability to maintain its shape and position in the air.

When the air is disturbed, the parachute will tend to return to its original position. This is a desirable characteristic for a parachute. The primary stability of a parachute is determined by its ability to maintain its shape and position in the air.

The primary stability of a parachute is determined by its ability to maintain its shape and position in the air. This is a desirable characteristic for a parachute. The primary stability of a parachute is determined by its ability to maintain its shape and position in the air.

Secondary Stability

Secondary stability is the term that can be applied to how a parachute responds to catastrophic events such as a bent or full frontal collapse. A parachute can make a difference, keeping the wing inflated and ready to resume stable flight. However, the time that air is on the ground, airlocks may not be enough. In fact, one

by
June 9, 2001

as much as possible, the author is to look to

Pressurization before the airlock

recover prior to impact. The author soon realized that the game was fairly seal the wing off when the air tries to enter the wing in its normal way, sealing against the

more than eighty five percent of the canopies sold are of information about the advantages of the airlock is. Others believe that airlocks are just another philosophy is the belief that "pressurization" consider to look closer at the airlock. In fact, we must

ram-air canopy to remain in control. This is generally attributed to the ability of the parachute to adjust and adapt to changing conditions. Primary stability includes even the most subtle airfoil distortions such as a front

ram air is distinctly different from the airlock. Since the shape of the wing is related to an airlock around less than "open-cell" canopy. This is very much an airlock and wing generally does not encounter "accidents".

primary stability is, however, it is the canopy stay in the air. This is a desirable characteristic for a parachute. The primary stability of a parachute is determined by its ability to maintain its shape and position in the air.

secondary stability is the term that can be applied to how a parachute responds to catastrophic events such as a bent or full frontal collapse. A parachute can make a difference, keeping the wing inflated and ready to resume stable flight. However, the time that air is on the ground, airlocks may not be enough. In fact, one

realize, there are atmospheric circumstances in which a metal wing may not be enough. The philosophy of the valved parachute design is that a wing that has air in it can reduce the risks of total surface area loss, but it cannot eliminate the possibility of serious injury. Sometimes no amount of preparation or technology can prevent a crash. The author is to look to

Several factors can contribute to a parachute failure. One of the most common is a line break, which is often accompanied by a rapid loss of altitude. Line slack due to wind can also create unknown variables that can lead to accidents. Maintaining line tension on any parachute is essential for minimizing the risks of catastrophic failure. We minimize the risk of slack lines by executing smooth control inputs and smooth release of input as well. Modern ram air canopies require much more than just pulling toggles, we are required to fly them.

Another limitation of the ram-air canopy is its ability to handle significant vertical air movement. A sudden downward gust can increase your vertical speed beyond your canopy's ability to climb. Remember; even a ram air canopy can crash in severe turbulence. There will always be a time for wise pilots to get on the ground. The old saying goes: "It's better to be on the ground wishing you were in the air, than being in the air wishing you were on the ground".

Conclusions

All things considered, however, it makes a lot of sense that a parachute that is capable of maintaining its internal pressurization and surface area increases your chances of survival. The most elegant, common sense ideas need little justification. Airlocks certainly fall into this category. We at Big Air believe that a ram air canopy is not complete without airlocks.

"A Canopy is simply Air Staying in a Wing... NO AIR, NO WING."

One must consider the fundamental concept of a "cell". In biology, a cell is the smallest component of life as we know it. It is a self-contained unit that exists in cooperation with others, which defines itself in terms of its cell wall or cell membrane... a little bubble of energy. A living cell defends itself from outside forces, and therefore has its own existence. This is life at its simplest. A dead cell has no complete barrier to the outside world, allowing its internal volume to ebb and flow, amorphically maintaining equilibrium with the outside world. Airlocking a parachute, we give it a life of its own, and it will fight to stay alive.

Does airlocking increase the safety of the ram-air parachute? In most cases, yes. It's very similar to wearing a seat belt. There are no guarantees that we will walk away from a crash, but I still always wear one. Parachutists will continue to take a "wait and see" approach to airlocks, and this conservatism clearly has a strong component of sanity. Nevertheless, six years and over 2000 airlock canopies certainly is a compelling amount of evidence.

