

Ask a Rigger | Comparing AADs

Q: What should I consider when purchasing an automatic activation device (AAD)?

A: Without stirring up much argument, one could say that three AAD manufacturers presently dominate the attention of U.S. buyers. In order of earliest appearance on the market, they are the Cypres from Airtec, the Vigil from Advanced Aerospace Designs and the Argus from Aviacom. The Cypres comes from Germany, while the Vigil and Argus hail from Belgium.

In 1991, Airtec introduced the Cypres as the first microprocessor-driven AAD, sending all prior models into the museums. The Cypres dominated the market until the first Vigils arrived in 2003, the same year that Airtec released the Cypres 2. Aviacom started selling the Argus in 2006. The design team for the Argus and the original Vigil shared a common lineage, but Aerospace Designs released a redesigned model, the Vigil 2, in 2007.

Regardless of the model year, all three brands sever the reserve closing loop when a freefalling solo jumper reaches a critical altitude of around 800 feet AGL (and around 2,000 feet for tandems). They all readily fit into any sport-parachute system made in the last 15 years and can handle a water landing to some extent. While they all enjoy a good reputation, all have had to meet technical challenges along the way. From the point of view of today's consumer, they differ as far as which additional functions are offered, method of operation, purchase price, maintenance requirements and service life.

Aside from the standard setting for experienced jumpers, all the brands offer alternate programming modes for student and tandem skydives. Cypres and Argus also have a setting for serious canopy swoopers. The user can switch modes on the Vigil and Argus, but only the Airtec factory or its service center at SSK

Industries in Ohio can reset the Cypres for a different application; however, the service (which includes switching out the colored buttons that indicate the different models of Cypres) is performed at no charge. No AAD yet provides a complete solution for the special needs arising from the lower freefall speeds of wingsuit jumpers.

The initial cost of purchasing an AAD unit is about the same for all three brands (around \$1,400), but be aware that since all three manufacturers do business in euros, prices will fluctuate with currency exchange and shipping rates. The additional costs of ownership of an AAD include battery replacement and scheduled maintenance,

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which are in the same ballpark for all three models. However, when comparing the cost on an annual basis (by projecting the cost over the life of the unit divided by years of expected service) the Vigil comes out ahead—coming in at about \$75 a year, about half that of Cypres or Argus. This is due to Vigil's claim of a 20-year life expectancy, compared to 12.5 years for Cypres and what Aviacom estimates for the Argus is "more than 12 years counting from the first time it has been switched on."

When estimating prices for second-hand AADs, divide the original cost of the unit by the estimated years of service and multiply that number by the number of years of service remaining. Airtec's website also includes an estimated-value calculator.

The FAA requires that installed AADs be "maintained in accordance with manufacturer instructions." Some say Airtec's requirements for Cypres to be returned for inspection and service every four years and removed from

service after 12.5 years are too strict. Conversely, Advanced Aerospace Designs and Aviacom are criticized for not requiring periodic checks on the Vigil and Argus models.

Although cost is a consideration, so are reputation, flexibility and ease of use. Airtec's scheduled maintenance has resulted in a low rate of unscheduled maintenance (Airtec advises Cypres 2 owners to forget about their batteries altogether, since battery replacement is included in the scheduled service), and the Cypres has the advantage of a lot more actual-use testing. However, a battery change for the Vigil 2 or Argus simply requires the services of a rigger.

High-performance canopy pilots might prefer a Cypres 2 or Argus, which can be programmed for activation at a higher descent rate, although it appears that only the most aggressive swoopers can achieve a descent rate high enough to activate an

AAD in its standard mode. Skydiving operations that switch AADs around from rig to rig might prefer the Argus or Vigil so they can reprogram the units to operate in another mode without shipping them to the factory.

Deciding on a brand of AAD is not easy for most skydivers, and that's good news since it means there are at least three viable options. All in all, the sport is lucky that jumpers have a good choice of automatic activation devices. Few jumpers wore them before they came to their present level of accuracy and reliability, and members of the gray-haired set who still remember friends they lost when no-pulls/low-pulls dominated the fatality reports will mostly agree that the added cost of skydiving due to AADs has been worth it. ♦

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Advanced Aerospace Designs



Airtec



Aviacom

