



THE LIGHT STUFF

The author travels to Europe and finds a Silent motorglider

By Dan Johnson

In the old days, for those who can remember that far back, children were supposed to be seen, not heard. While that sentiment may be outdated, it's not bad advice for light airplanes, and if an aircraft is truly silent, it might be quite remarkable. Welcome to the world of Euro aviation. At an airshow in France in May, the beautiful Silent sailplane/motorglider made quite an impression. But that impression was not a rattling of your eardrums. In fact, the Silent lives up to its name.



The Silent is available as a sailplane (without the engine unit) or as a motorglider, shown here.

Making a showing at a French airshow, the Italian Silent-IN soaring motorglider features a slick retracting mechanism for the engine and prop.

Silently Efficient

The Silent pulls out all the stops in the pursuit of soaring performance. The motorglider version will even pull out its engine on an as-needed basis. After hours of soaring, should you lose lift or prefer to fly directly home rather than search out thermals, you have other options. Simply erect the engine and push the electric starter, and soon you will be motoring home, propelled by a single counterbalanced blade.

Retractable-engine motorgliders aren't new, but I've never seen one done better than this, and unlike many high-priced motorgliders, you may actually be able to afford the Silent. Of course, those full-size models may have more features and interior refinements, but Silent workmanship is exquisite, and the design comes complete with Italian flair.

I met the Alisport Silent at an airshow/expo called Mondial De L'Air, which translates to Air World. During its second annual occurrence in the southern French Alps, the Air World show has proven itself to be unique. Attracting 145 exhibitors (up nearly 75% from last year's premiere event), the show is limited to the light end of aviation. No warbirds, military jets, four- or six-seaters, or corporate aircraft are displayed. Instead

it focuses on the light sporting end of aviation, and in Europe this segment of flying is thriving.

Meet the Silent

The Silent fits the Mondial mode well, since it finally offers a lighter, sportier way to soar with an engine. In the heavy end of the spectrum, motorglider weights are much higher, and purchase costs can run to \$200,000 for the finest of the breed. Stunning to behold, these thoroughbreds perform brilliantly, but sadly, only a few will experience



Silent Specifications

Wingspan	39.4 ft.
Length21 ft.
Height	4.1 ft.
Aspect ratio	14:1
Wing area	111 sq. ft.
Empty weight	375 lb.
Gross weight	640 lb.
Limit load	+4.6/-2.6
V _{NE}	125 mph
Cruise speed (engine running)	85 mph
Glide ratio (at 52 mph)	32:1
Sink rate (at 42 mph)	160 fpm
Stall speed	32 mph
Takeoff roll	325 ft.
Landing roll	200 ft.

ownership when the prices reach into the stratosphere.

For a mere 39 million...Italian lire (about \$21,000), Europeans can own a Silent ready to fly under various regulations there. The retractable motorized version is about \$32,000. This certainly isn't pocket change, but for a 32:1 glide performance and sleekness to rival sailplanes costing five times as much, it represents an excellent value. For U.S. customers, the

company says it will offer the Silent as a kit aircraft sometime in 2000. It hasn't finalized pricing for this yet.

Since this is a light glider—at a fraction of the weight of the beautiful sailplanes we normally envision when we think of soaring—the Silent flies at ultralight speeds.

Indeed, stall comes at a low 32 mph, down in the range of most powered ultralights. With a never-exceed speed (V_{NE}) that hits 125 mph, the Silent also offers a remarkably wide speed envelope, exceeding the 4:1 ratio that typically defines an aircraft with broad speed ranges. Its best glide of 32:1 comes at 56 mph in the glider and 60 mph in the powered version.

Sink rate defines an important parameter for soaring flight, as it is that measurement that determines whether you can get up, stay up and climb high. While good glide essentially means to run between thermals with little altitude loss, a good sink rate means you can effectively work the lift to gain altitude. The Silent boasts a sink rate of only 125 fpm in the unpowered version and 140 fpm in the classiest powered version.

Beauty in Triplicate

In fact, the Silent is available in three variations. The first—called the Silent-UL—is the unpowered sailplane version. Another has a Koenig four-cylinder, 28-hp, electric-start engine with a

foldable prop. It is dubbed the Silent-OP and distinguishes itself by having a removable engine that doesn't retract neatly like the newest model.

The Silent-IN is the third of the simply named soaring machines, and it has the engine installation down to an art form. A single-cylinder Zanzottera engine produces 28 hp (just like the Koenig) and swings a singularly efficient single-blade prop. When engine retraction is called for by the pilot, a mechanism centers the blade, retracts the engine, and closes a door to completely conceal the powerplant behind the pilot. Beautiful!

The retractable engine shows further refinement by having electric start, but it also allows an electric generator to replenish the battery. The manufacturer also says the Silent-IN can be fitted with a ballistic parachute.

The three models differ in weight and limit-load parameters. The Silent-UL glider has a +6/-4 G rating at a gross weight of 528 pounds. The removable engine Silent-OP glider and the slick retractable Silent-IN have +4.6/-2.6 G ratings at 638 pounds gross. The additional weight to add power comes with some penalty for load capability.

Kits for the Silent will be available sometime next year to U.S. customers, the company says, though prices and delivery dates have not yet been finalized.

Can You Swing It?

Alisport is clever in its reading of the market. True not only in space-limited Europe, aircraft with exceedingly long spans (to 85 feet!) can be hard to maneuver in hangars. Silent has a 39-foot span, making a good compromise between span for soaring power and practical considerations. Like it or not, most planes spend more time in storage than in flight. They might as well store well, which surely helps account for the continuing popularity of folding-wing options on today's light aircraft.

Built with the latest composite carbon fiber technology, any of the Silent models should last well. The wings unplug for transport, and Alisport even makes a custom trailer. So if you're interested in purchasing a light motorglider for a fraction of what it would cost to buy a traditional fast-glass sailplane—and if you're willing to wait for the kit and then make phone calls to Italy for manufacturer support—you could be the proud owner of a truly Silent motorized soaring machine. **KP**

FOR MORE INFORMATION, contact Alisport S.r.l., Via Confalonieri 22 23894 Cremella (LC) ITALY; call (from U.S.) 011-39-039-921-2128; fax 011-39-039-921-2130; e-mail alisport@tin.it; www.alisport.com (available in English, French and Italian); click on the flag symbols in upper left on home page.

Counterbalanced, single-blade props are rare but offer better efficiency from the undisturbed air seen by the blade.

A Zanzottera engine pushes the aircraft into the air with adequate energy, and it retracts snugly in soaring flight behind molded bay doors.

