

A Unique Family of Aircraft



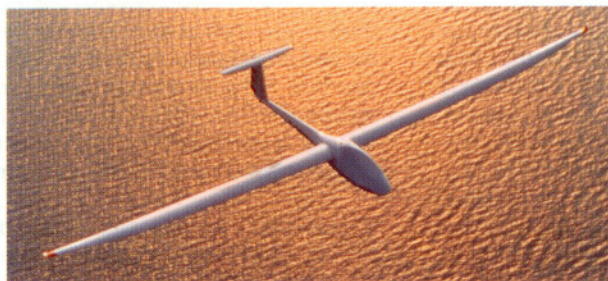
S10 Chrysalis



S10-VT Turbo



S15 Utility



S-UAV Unpiloted

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S15 Utility

High performance sailplanes benefit from the decades of research into high aspect ratio slow speed flight. Recent developments at Stemme have produced a remarkable alternative to conventional fixed and rotor wing aircraft.

The S15 is equipped with under wing hard points and cable channels for easy installation of:

- Search lights
- Infra red cameras
- Video camera
- Science research equipment.
- Operators have found enormous flexibility in mounting specialized payloads

A bubble shaped canopy and centrally mounted engine offer excellent visibility and ample cockpit space for a crew of two.

The noise signature of an S15 flying at an altitude of 900 feet is barely audible -- a mere 57 decibels. The S15 permits law enforcement surveillance without disturbing residents. And for covert missions, the plane can be operated silently.

Streaking to the destination at 150 kts, then loitering in tight circles at 50 kts, the S15 delivers 90% of a helicopter's utility for a small fraction of the cost

Maybe your next helicopter shouldn't be a helicopter ... the S15 offers a *better* solution

S-UAV Unpiloted

Demand for military and commercial unpiloted air vehicles (UAV) is growing. Stemme's S-UAV OEM program can reduce much of the development time required for midsized UAV's.

UAV integrators are invited to choose from a variety of high aspect ratio airframes and propulsion systems derived from Stemme's legendary self-launching sailplanes. By adding autonomous flight control systems, UAV integrators find this a rapid and cost effective means of market entry and deployment.

Major components of finished UAV airframes and powerplants can be supplied in production quantities. Attributes include:

- State-of-the-art composite construction (Carbon / Kevlar / GRP)
- Detachable, high aspect ratio wings with spans from 60 to 80 feet or more
- Service ceilings from 15-40,000 feet or more
- Payload capacity from 400 to 800 pounds
- Conventional or tricycle landing gear
- Mission duration up to 40 hours

These attributes and others are delivered quickly and cost effectively on an OEM basis. UAV suppliers are encouraged to contact Stemme for details of custom configurations and pricing.

S10 Chrysalis

A complete sense of freedom -- the feeling that draws many people to flying -- is best experienced in the sport of soaring. No flight regime is more rewarding than successfully finding and exploiting rising air -- the essence of soaring. Only the Stemme S10 *Chrysalis* self-launching sailplane offers the recreational pilot an opportunity to experience this freedom without the hassle associated with traditional soaring:

- No tow plane and pilot
- No ground crew
- No retrieve crew
- No out landings in farmer's fields

Just the pure pleasure of high performance soaring combined with the simplicity and convenience of powered flight. Experience the *Chrysalis* and rediscover the essence of flying!

Imagine a day of flying with the S10 *Chrysalis*:

Roll the S10 out of a typical T-hanger ... unfold the wings by yourself ... taxi to the active runway on a conventional landing gear without ground crew ... takeoff with a ground roll of 640 feet ... climb at 750 fpm ... cruise under power at 90 kts to your favorite soaring site ... retract the propeller and transition to soaring flight in less than five seconds ... soar alone or with a friend in a high performance 50:1 sailplane that achieves a minimum sink rate of 110 fpm at 57 kts (only 230 fpm at 80 kts) until the lift dies that afternoon ... flawlessly restart the motor in less than five seconds, then ... fly back, put the ship away, and STILL BE HOME IN TIME FOR DINNER!

S10-VT Turbo

Announced in November, 1996, the Stemme S10-VT Turbo redefines the ultimate in self-launch sailplanes. Now equipped with a 115 hp turbocharged Rotax 914 engine, the Stemme pilot can cruise cross country under power with increased cruise speed and climb rate.

Turbocharged power brings a new level of performance to the Stemme family of aircraft:

- Cruise 800 NM in the S10-VT's comfortable side-by-side cabin
- Travel quickly from point to point at 130 kts
- Maintain 800 fpm climb rate to an altitude of 10,000 msl -- ideal for operations from high altitude airports

Neither forward mounted engines with feathering propellers, nor rear mounted "pop-up" motor designs have satisfied pilots' needs for rapid and reliable transition between powered and soaring flight. In 1984, Dr. Reiner Stemme introduced a revolutionary propulsion system which allows nearly instantaneous transition from powered to soaring flight. The Stemme system starts with a center mounted engine, leaving the crew in front to enjoy an unobstructed view. Power is transmitted forward via a carbon fiber drive shaft between the two pilot seats to a foreword mounted gearbox. The patented folding propeller remains folded until the engine begins turning, then centrifugal force unfolds the prop blades. There are many advantages:

- No drag from exposed cooling ducts
- No increase in drag during engine deployment
- No sudden shock cooling
- Above all, the system has proven reliable and nearly maintenance free

Stemme Family of Aircraft

Specifications*

	<i>S10-V Chrysalis</i>	<i>S10-VT Turbo</i>	<i>S15 Utility</i>
Wingspan (ft)	75.5	75.5	65.6
Gross Wt (lbs)	1874	1874	2315
Empty Wt (lbs)	1420	1420	1515
Payload (lbs)	454	454	800
Takeoff-Sea Level (ft)	790	620	920
T.O. 50'-Sea Level (ft)	1280	1050	1480
Takeoff-3000 ft msl (ft)	950	720	1040
T.O. 50'-3000 ft msl (ft)	1510	1150	1380
Best L/D	50:1	50:1	44:1
Minimum Sink Rate (ft/min)	110	110	132
Maximum Cruise (kts)	120 (sea level)	134 (10,000 ft)	150 (15,000 ft)
Maximum Rate of Climb (ft/min)	630	800	600
Range (std)	860	810	-
Range (optional)	1190	1130	900**

* Specification are current at time of printing and subject to change.

** Additional fuel may be carried in wing pods for Increased ferry range.



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