

# The Sky Sportster

**Simon Hackett reports back from his recent visit to the Stemme factory in Strausberg, where he flew a Stemme S6-RT motor glider.**

This is the most recent aircraft produced by the people who make my wonderful Stemme S10-VT. It is something of a 'little brother' to the S10-VT.

Though it has been in production for a few years, I've not had a chance until now to see, let alone fly, one.

An 18-metre motor glider powered by the same Rotax 914 Turbo engine as in S10, it has a hydraulic retracting undercarriage system and a more conventional MT propeller (electric variable pitch with a full-feathered position for soaring flight).

The S6 is a very easy aircraft to fly. It is responsive, but much more stable and easy to manage at high speed in cruise than the S10-VT (which is quite sensitive on elevator by the time you're up to full cruise speed). This is an aircraft that could be flown at cruise speed for long periods

with low fatigue and with very good fuel economy (because it is a motor glider with a very efficient design).

The factory demonstrator that I flew with one of the factory pilots was very well equipped with electronic gizmos in the panel, including a Dynon EFIS, an LX8000 colour glide computer and a Garmin GPS 695.

It wasn't a great soaring day, so we flew up to 10,000 feet under engine power toward the Polish border, and then shut down and went into gliding mode to explore more of the neighbourhood on our slow descent back toward the earth.

The cockpit is very comfortable and I could easily fly this aircraft for a long period. I tried some tight low speed turns with flap out to simulate thermalling and it all seemed to work as expected.

I did a touch-and-go landing and then one more circuit to a full-stop landing to get a feel for how to approach and land in this aircraft. That works well too. The air brakes have a centre 'detent' half-open setting to make the approach workload lower. Once you touch down, the nose is held up to slow the aircraft with aerodynamic drag before it settles down onto its nose wheel again. The nose wheel steering is easy and precise, and if needed you can taxi quite quickly while remaining very stable in terms of steering/positional control.

#### What didn't I like?

The fuel system management is too complicated and would benefit from being simplified. The left tank feeds via a transfer pump to the right tank, which feeds via another pump to a central header tank which feeds via a main and





*It's fast, easy to fly and has the feel of a great sports aviation two seater that could be used to cover lots of ground.*



*Author with Stemme factory pilot Andreas Hebner*

aux pump into the engine. I think this would work better with the left and right tanks feeding directly into the header tank (which would also improve redundancy in terms of handling the failure of a fuel pump)

The flap lever needs a fair bit of force to unlock it to move between flap settings – but you get used to that pretty quickly.

When it's on the ground, the covers for the retracted undercarriage remain open, exposing the underbelly of the engine bay somewhat. In Australia you'd want to cover that area up on the ground, to make sure you didn't wind up with any rodents making a home in there in the winter!

Like its big brother, the S10-VT, one consequence of squeezing the engine into a small fuselage installation is that it is pretty 'tight' in there. You'd want to have some patience when doing engine maintenance – although the entire engine can be removed (downward) from the

aircraft if something substantial needs to be done.

**What did I like?**

It's fast, easy to fly and has the feel of a great sports aviation two seater that could be used to cover lots of ground and to go long distances under engine. Compared to the S10-VT, this aircraft is further on the spectrum toward a two seat sports aviation aircraft that can also soar nicely... which is precisely what it was designed to be.

I think it'd be a really excellent aircraft for instruction. The side-by-side configuration is far more sociable, the aircraft is easy to fly with positive and predictable control response, the controls are light, and the comfort level and outside visibility are both high.

I could easily get used to flying this aircraft a lot. It definitely put a smile on my face.

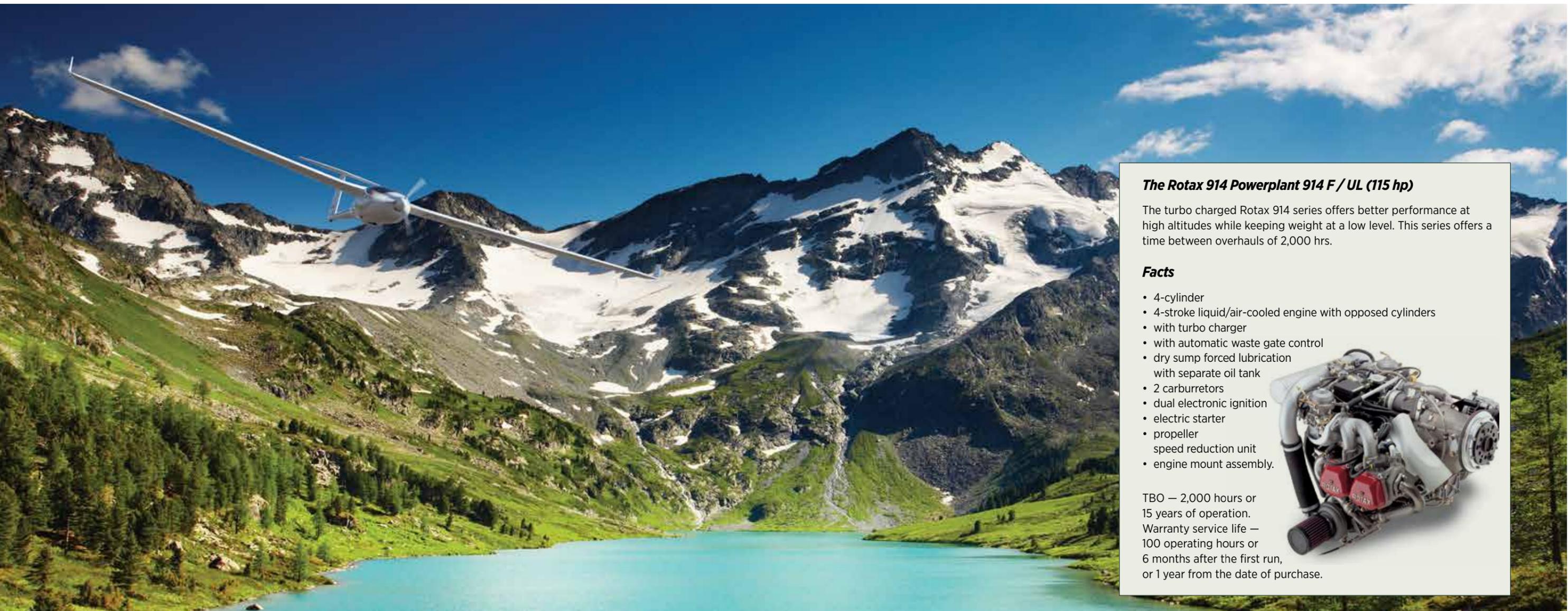
It also feels more robust than the S10-

VT, and for 'workhorse' applications (including surveillance and airborne sensing – two markets in which it is already being used), I think it'd be a great choice too. There is a variant of the S6 called an ES15 Ecarys being made by Stemme which is designed for precisely those applications, and which is capable of operating at an impressive 1100 kg maximum take-off weight to allow substantial sensing payloads to be carried in under-wing pods.

This article is based on a review first published by the author at [simonhackett.com](http://simonhackett.com)

*Sincere thanks to Stemme, and its new CEO Paul Masschelein for the opportunity to visit, tour the factory, and especially to fly this great aircraft. Simon Hackett is a long-time owner and pilot of a Stemme S10-VT.*





**The Rotax 914 Powerplant 914 F / UL (115 hp)**

The turbo charged Rotax 914 series offers better performance at high altitudes while keeping weight at a low level. This series offers a time between overhauls of 2,000 hrs.

**Facts**

- 4-cylinder
- 4-stroke liquid/air-cooled engine with opposed cylinders
- with turbo charger
- with automatic waste gate control
- dry sump forced lubrication with separate oil tank
- 2 carburetors
- dual electronic ignition
- electric starter
- propeller speed reduction unit
- engine mount assembly.



TBO — 2,000 hours or 15 years of operation.  
 Warranty service life — 100 operating hours or 6 months after the first run, or 1 year from the date of purchase.

**HOW IT ALL BEGAN**

In 1984, Stemme became the first aircraft manufacturer in West Berlin to gain approval from the Allied Armed Forces to commence production operations. Only two years later, the S10 embarked on its maiden flight in Braunschweig and then in 1987 was exhibited in its final form at the AERO trade show in Friedrichshafen.

Various unique selling points, such as the patented fully retractable propeller or the engine mounted behind the cockpit at the aircraft's centre of gravity together with a glide ratio of up to 50, swiftly led to the motor glider opening up the premium segment. In 2012, the S6 finally received its type certification from EASA to provide an additional model from the house of Stemme.

**ON A GRAND TOUR**

Developed as a grand tourer, the Stemme Sky Sportster S6 is particularly suitable as a sportive touring aircraft with distinct soaring capabilities. In contrast, the Peak Performer S10 have brought the aircraft worldwide recognition for deployment as a research platform in scientific projects and as world-record-holding glider in high-altitude and long-distance flights. However, Stemme is also travelling in the wider sense as a company and is expanding with a branch in the US market as well as service partners on all continents.

**NEW HORIZONS**

Since November 2012, Stemme AG has been under the management of Paul Masschelein. Through his appointment as CEO, the company

has already acquired an entirely new charisma and is undergoing internal restructuring. Many new developments have thus been scheduled for the coming years, aimed at allowing the company to perform even better on the global market and respond to the needs of both existing and new customers.

**ABOUT STEMME**

Stemme AG is a German manufacturer of premium sports aircraft located in Strausberg, Berlin. Founded in 1984 the company developed the Stemme Peak Performer S10, for high performance soaring and ambitious touring, and the Sky Sportster S6, for sportive touring combined with distinct soaring capabilities. Stemme AG has a subsidiary in South Carolina, USA and service partners around the world.

**SPECIFICATIONS**

**Stemme S6 Sky Sportster**

Dimintions		
Length:	27 ft 9 in	8,5 m
Height	8 ft 2 in	2.5 m
Wing span	59 ft 1 in	18 m
Wing span derigged	20 ft	6 m
Wing area	192.7 sq ft	17.9 m2
Weights & Capacities		
Maximum take-off mass MTOM	1,980 lb	900 kg
Maximum useful load	485 lb	220 kg
Number of seats	2	
Standard tank capacity	17.2 US gal	65 l

Performances		
Maximum speed (Vne)	146 kts	270 km/h
Maximum speed @ MSL	130 kts	241 km/h
Maximum cruise speed @ FL100	146 kts	270 km/h
Maximum range	860 nm	1600 km
Climb rate @ MTOM	925 ft/min	4.7 m/s
Service ceiling	16,500 ft	5000 m
Glide ratio @ 57 kts	36:1	
Permissible loads	+5.3 g / -2.65 g	
Noise emission	59.7 dBA	
Take-off and landing distances (MSL, ISA, MTOM) at MTOP		
Take-off run	771 ft	235 m
Take-off distance	1,116 ft	340 m