

Clean lines of the Shark 600 in flight.



LONG-RANGE PRECISION

RETIRED RAAF TEST PILOT RON HAACK PRESENTS HIS FIRST IMPRESSIONS OF THE SHARK 600 SPORTS AIRCRAFT.

SHARK.AERO, a Czech-Slovak aerospace company based in Slovakia, has developed the Shark 600, a sports category aircraft that boasts a range of appealing attributes. In 2022, 19-year-old Zara Rutherford piloted #080 aircraft to global acclaim, completing a solo flight around the world and securing a Guinness World Record. Recently, the Costa Rican distributor of Shark flew a new aircraft from the factory in Slovakia to Central America, clocking up 7,961NM (14,743km) in 57 hours, at an average speed of 142 knots. Both achievements demonstrate that the Shark has the legs to fly further and somewhat faster (162kts) than many other aircraft in its class.

Ex-RAAF Qualified Flying Instructor Andrew Mills now runs Shark Aero Australia and has kicked off the Shark's Australian debut with a national demo tour that will culminate in an appearance at the Australian International Airshow at Avalon in late March. The aim of the tour is to offer pilots a chance to experience the Shark's features, performance and utility firsthand.

THE AIRCRAFT

Shark 600 is a two-place, low-wing sports category aircraft with retractable tricycle landing gear, designed in compliance with European UL and US Light Sport Airplane standards. The demonstrator aircraft that Shark Aero Australia has shipped to Australia for the tour is powered by a single 100HP Rotax 912ULS engine driving a variable-pitch propeller, but other powerplant configurations will be available later in 2025.

The composite monocoque fuselage incorporates an integral fin and is constructed as one piece with integral interior frames, armrests and floors. The cockpit shell creates an ergonomic cabin structure for two crew members sitting in tandem inside a Kevlar-carbon-aramid cage.

The forward fuselage provides a firewall with four engine mounting stations, a Ballistic Recovery System installation and nose landing gear mounting points. Further aft, the fuselage incorporates main landing gear and cockpit mounting points, attachments for the horizontal stabiliser, rudder mounts and a bottom fin.

The Shark 600 has a composite wing with trapezoidal root, and elliptically shaped tips optimised for fast, efficient cruise speeds. The wing is structured around a carbon main spar and an auxiliary spar carrying aileron hinges and a single-slotted flap extending over 60 percent of the trailing edge span.

A one-piece cockpit canopy consists of a carbon fibre frame with a Plexiglas windscreen. The canopy is supported by a gas strut and hinged on the starboard side. The canopy is locked from inside by a single point system, accessible to both pilots.

The elevator and ailerons are manipulated by side-stick controls on the right console at each pilot station. An electrically powered trim motor drives a trim tab fitted to the left section of the elevator. Ailerons are fitted with servotabs to reduce roll control forces at higher speeds and the circuit incorporates a spring centring mechanism in place of a trimming system.

The rudder is manipulated by floor-mounted pedals that also provide for independent hydraulic brakes and nose wheel steering.

Extension and retraction of the tricycle landing gear is electrically powered, with emergency gear lowering handles provided as a backup. The nose wheel retracts aft into a well (behind the firewall), while the

main landing gear retracts into the centre-wing section.

An EFIS/EMS with integrated flight data, engine parameters and navigation facilities is a standard fit for the front seat pilot. Controls for landing gear, flap, radio transceiver, movable ballast, optional equipment and backup flight instruments are incorporated in an ergonomic arrangement on the forward instrument panel. The aft seat instrument panel is integral to the canopy frame and can be configured optionally with an EFIS/EMS display and controls for radio transceiver, flaps and landing gear operation.

FLYING QUALITIES

Apart from its sleek, attractive appearance, the Shark 600 is a delight to fly. The side stick controls fit comfortably in the hand and facilitate precise pitch and roll commands throughout the flight envelope. Ergonomic implementation of pitch trim control and the radio transmit switch on each stick supports instinctive operation of both functions.

Pitch and roll control forces are light but positive, nicely harmonised and together

with the power plant characteristics give a satisfying impression of a solid platform that is both stable and responsive. There is a slight breakout force (initial resistance to movement) in the roll control circuit that may affect close coupled tasks, such as close formation flying. Shark Aero is aware of the issue and may engineer the source of the effect out. Until then, as with most such characteristics, pilots learn, with experience, to compensate for the effect.

After flying the aircraft across the country, Leanne Mills, co-director and co-pilot on the demo tour, noted that she was more comfortable in the back of this tandem aircraft than in a side-by-side configuration, especially in the intense Australian summer heat. "There's more room in the back so I don't get sweaty being squished in beside Andrew for hours at a time, and it's easy to fly from the back seat as there's a full Dynon display in the back," she says.

The aircraft is not currently certified for aerobatics which is a shame as the view from the cockpit is expansive and unencumbered, so gentle aerobatics would



ABOVE The cockpit instruments and controls.

add another enjoyable dimension to the Shark 600 experience and appeal.

Whether it's the thrill of precision handling or the convenience of long-range capability, the Shark 600 is poised to make waves in the Australian aviation market. Shark Aero Australia invites pilots to see, touch and fly their impressive machine. Visit the Shark display at Avalon or visit sharkaero.com.au to request a demo flight. You will enjoy it!. 🛩️