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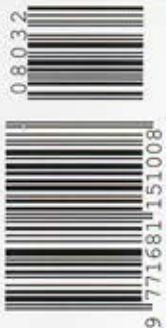
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Cover photograph by Athol Franz

WIN WIN WIN WIN WIN
Introductory flight
in the Bristell



Introducing the **BRM AERO BRISTELL**

By Athol Franz

The BRM Aero Bristell is a Czech low-wing, two-seat in side-by-side configuration, single engine in tractor configuration, ultralight and light-sport aircraft that was designed by Milan Bristela and is produced by BRM Aero. The aircraft is supplied as a complete ready-to-fly aircraft that was introduced at the AERO Friedrichshafen 2011 show.



*Photographs by Athol Franz with
Chantel Gredes at the controls
of African Pilot's Cessna 182*



BRM Aero Ltd was established for the development, production, sale and maintenance of ultra-light and light sport airplanes. The company is mostly focused on fulfilling individual orders and it is able to specially tailor each installation and modification to the customer's request. The company is also working on new innovations and the advanced development of produced airplanes. This work is based on the company's longstanding experience in aircraft development, production and sales. For this reason, every one of its customers receives a unique example of an airplane; one that best corresponds with their ideas. The company helps advise its customers in choosing the optimal instrument panel layout for their application purpose, including the optimal combination of engine and propeller.

The aircraft was designed to comply with both European Microlight rules and also the US light-sport aircraft regulations, by using different versions for each regulatory environment. Manufactured from aluminium the aircraft features a 130 cm (51 inch) wide cabin at the shoulder, with a bubble canopy over the cockpit. The standard engine is the 75 kW (100 hp) Rotax 912ULS, but other power plants have been fitted including the 115 hp (86 kW) Rotax 914 Turbo, Rotax912IS and Jabiru 120 hp (89 kW) engine. Other engines are planned, particularly for the United States market. The aircraft has a notably high useful load of 279 kg (615 lb). The landing gear is of tricycle configuration and the wings feature flaps. After 42 examples had been completed the aircraft was introduced into the US market in September 2011 at the AOPA Summit. The Bristell LSA in the three-wheel fixed undercarriage configuration is a great choice of aircraft for use in flight training at flight schools, glider towing and recreational flying. Thanks to the combined comfort of good ergonomic design in the largest cockpit in its category, this aeroplane is the ideal vehicle for longer cross-country flights. The HD version offers heavy-duty wing spars, which make cross-country flights much safer in extreme weather conditions.

The Bristell is refined, clean and stylish, with a less rakish profile than other LSA types that are readily available on the South African market. This aircraft exemplifies attention to detail, from construction to airframe paint and trim, instrumentation and cockpit finishing. The slight positive curve in the fuselage belly reduces turbulence by dispersing the force of gusts. The centre spar extends 46 cm to either side of the fuselage so when you step onto the wing you are on the spar, not just the skin of the plane. From that point the wings rise in a mild dihedral contributing to the lateral stability of the Bristell. The two lockable and water proof wing lockers provide great space to carry the emergency kit and some tools jumper cables and even a tyre compressor in the case of getting a flat tyre. The lockable canopy provides for a panoramic view of one's surroundings whilst taxiing, take-off, landing and in the cruise.

The Bristell's adjustable rudder/toe brake pedals have a simple device to make adjustments where even for taller pilots there is plenty of legroom. On long cruising flights the rudders can be pushed all the way forward for relaxing legroom. Tricycle aircraft like the Bristell are easy to handle thanks to the steerable nose wheel and have better forward visibility as the pilot sits on the level. The Bristell is manufactured from mostly metal, with just a few composite panels such as the wing tip fairings, engine cowls, canopy frame, wheel spats and some other small items that require compound curves. 60-litre fuel tanks are located in the leading edge of the inboard section of each wing and are fitted with flush lever actuated locking fuel caps. The leading edges of both wings also accommodate the LED landing lights as well as strobe lights fitted to the wing tips. The left

aileron is fitted with an electronically operated trim tab, which is a feature not often found on LSA types. Large span electrically operated flaps fitted to the trailing edge of the wings are hinged on low mounted supports that allow the flaps to open a slot before being lowered, thereby increasing their efficiency. Situated behind the seats is a small baggage compartment capable of holding up to 15Kg. To aid entry into the wide cabin there are handholds located both between the upholstered leather seats and the instrument panel brow.

Various Bristell models have been designed:

- Bristell LSA. Heavy duty model with a 8.13 m (26.7 feet) wingspan, heavier duty wing spars and a gross weight of 600 kg.
- The model for the US light-sport aircraft category with a 9.13 m (30.0 feet) wingspan and a gross weight of 600 kg
- Bristell RG retractable gear model with a 9.13 m (30.0 feet) wingspan and a gross weight of 600 kg (1,323 lb).
- Bristell fast-build kit is also available as per the fully built aircraft.

MAIN FEATURES

Steerable nose wheel, toe brakes both sides, robust design, custom paint design, four choices of canopy bubble colour, rescue system installation available, custom instrumentation and custom upholstery.

GENERAL CHARACTERISTICS

Seating for pilot and passenger, length: 6.45 m (21 feet 2 in), wingspan: 8.13 m (26 feet 8 in), height: 2.28 m (7 feet 6 in), wing area: 10.5 m² (113 square feet), empty weight: 290 kg (639 lbs), gross weight: 600 Kg, fuel capacity: 120 litres, fuselage luggage compartment 15 kg, two wing luggage compartments at 20 kg each.

PERFORMANCE

Cruising speed: 214 km/h (133 mph; 116 knots), stall speed: 59 km/h (37 mph; 32 knots) flaps down, never exceed speed (VNE): 289 km/h (180 mph; 156 knots), G limits: +4/-2.

Flying the Bristell

FLYING THE BRISTELL - BY CHANTEL GREDES

I was delighted to go for a flip in the Bristell. This sleek machine, on first impression, promises to deliver thrills and it certainly did. Taking off on a lovely sunny afternoon, the Bristell was airborne in approximately 20 metres partly due to significant wind of 20+ knots on the nose on runway 35 at Rand Airport as well as the unbelievable short-field performance of the aircraft. With a bit of a headwind we were climbing out at 1000 feet/min, cruising at 90 knots with no effort at all.

I am not much of a joystick pilot, but with small inputs the aircraft is responsive, gliding through the sky like an eagle.

"every one of its customers receives a unique example of an airplane; one that best corresponds with their ideas."

The fuel burn is excellent at 15L of fuel per hour in the cruise. This aircraft is cheaper than running a luxury motorcar. To add to all the performance, the interior of the aircraft is spacious with lots of leg and elbow room. Finally, the panoramic canopy provides complete situational awareness and excellent visibility at all times. A Bristell is an absolute must for that shopping list! 🛩



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Distributed by South African General Aviation, Hangar 28, Rand Airport, Johannesburg
Contact Ian 082 803 4611 ian@bristell.co.za