

UPDATES

NEW **ZODIAC CH 650**

Design Features

Specifications

Performance

Cabin **Dual Sticks** Upholstery Kit

Engines:

ULPower Jabiru 3300 Rotax Cont. O-200 Corvair Lycoming Others

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"The ZODIAC XL excels at high-speed cross-country cruising, but performance on the runway is impressive as well." **KITPLANES** magazine, Jan. 2004



The following performance figures are based on prototype test results of the ZODIAC XL. Figures are based on initial flight test data. Demo flights in the aircraft can be arranged by appointment to verify performance figures.

- <u>Click here</u> for details about Sport Pilot
- Click here for Specification Figures

PERFORMANCE	Rotax 912S (100 hp)		Jabiru 3300 (110 hp @ 3000 rpm)		Lycoming O-235 / 233 (115 hp)	
ZODIAC CH601 XL	Gross Weight 1,300 lbs.	Gross Weight 590 kg.	Gross Weight 1,300 lbs.**	Gross Weight 590 kg.**	Gross Weight 1,300 lbs.	Gross Weight 590 kg.
MAX CRUISE (sea level, continuous)	134 mph	216 km/h	138 mph	222 km/h	138 mph	222 km/h
75% CRUISE @ 8,000 ft. (TAS*)	155 mph	250 km/h	160 mph	258 km/h	160 mph	258 km/h
VNE	160 mph	260 km/h	160 mph	260 km/h	160 mph	260 km/h
Vs1 STALL SPEED - no flaps	51 mph	82 km/h	51 mph	82 km/h	51 mph	82 km/h
Vso STALL SPEED - flaps down	44 mph	70 km/h	44 mph	70 km/h	44 mph	70 km/h
RATE OF CLIMB	900 fpm	4.6 m/s	1200 fpm	6.1 m/s	930 fpm	4.8 m/s
TAKE-OFF ROLL	550 feet	168 m.	500 feet	152 m.	500 feet	<mark>152 m</mark> .
LANDING DISTANCE	500 feet	152 m.	500 feet	152 m.	500 feet	152 m.
RANGE (std., SM)	656 miles	1056 km.	662 miles	1065 km.	575 miles	925 km.
ENDURANCE (std.)	4.9 hours	4.9 hours	4.8 hours	4.8 hours	4.2 hours	4.2 hours
LOAD FACTOR (G) ultimate***	+6/-4 g	+6/-4 g	+6/-4 g	+6/-4 g	+6/-4 g	+6/-4 g



Zodiac Home Design Kit Construction Performance figures given at standard atmosphere, sea level, no wind, unless otherwise indicated. All technical data, specification and performance figures subject to change without notice. Range and endurance figures are quoted with <u>no fuel reserve</u>.

* TAS is indicated airspeed <u>corrected</u> for temperature and altitude. The corrections are approximate. ** Jabiru 3300: preliminary flight test results, with 350 lbs. load. Cruise at 2800 rpm. *** Per AMD Zodiac CH 601XL / CH 650 SLSA Pilot Operating Handbook (11/09) Operating Limitations.



SPORT PILOT READY ZODIAC XL: The standard ZODIAC XL kit aircraft meets the definition of a Light-Sport Aircraft as defined by "**Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft**" (7/20/04). A Sport Pilot may fly any aircraft that meets the definition of a Light-Sport Aircraft, and such aircraft does not need to change its certification category to be operated by a Sport Pilot. Note: Max. Cruise = Max Continuous Airspeed (straight and level), sea level.

NOTE: Specification and performance figures are based on standard factory prototype flight test results, and are subject to change and revision without prior notice. Zenith Aircraft Company cannot guarantee that the aircraft, as constructed by the builder, will meet the definition of a Light-Sport Aircraft. Due to the gross weight and stall speed limitations of the Sport Pilot / Light-Sport Aircraft category, it is recommended that the aircraft be kept "as light as possible" if planning to operate the aircraft in this category. Larger and heavier engines and other installed equipment will limit the useful load of the aircraft, and may disqualify the aircraft from meeting the defined category limits. Subject to meeting actual FAA rules.

"It runs fast, carries a decent load and offers a comfortable cabin. As you might expect from a designer who has several certificated airplanes to his credit, it flies with no surprises..."

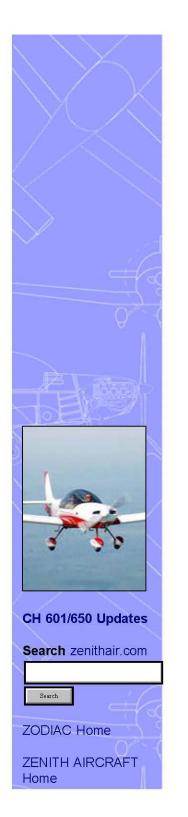
CustomPlanes magazine

- <u>Click here</u> for Specification Figures
- <u>Click here</u> to print Specification and Performance Info
- <u>Click here</u> for details about Sport Pilot
- Click here for builder / owner resources

Vigorous performance:

"My evaluation of cruise speed showed about 140 mph at 2800-2900 rpm, however, the company plans a different prop for Sport Pilot. At a 130-mph cruise, Zodiac XL felt faster. The numbers don't relate perfectly to the sensation of speed. It might have been the open bubble canopy, which insures massive visibility, but also imparts a sense of motion. The canopy had good optical qualities, seeming distortion free to my eyes. "Using 100 mph for good over-the-nose visibility, Zodiac XL's climb rate hit 900 fpm with two on board weighing something less than full gross. Using a climb prop installed for





Sport Pilot — to restrain its speed so as to stay within the definition — the climb rate might exceed 1,000 fpm. My trials with steep turns done at 45-50 of bank showed stable and steady characteristics. It reveals the Zodiac as an efficient flying machine."

General Aviation News, August 2002



"[<u>Chris Heintz</u>] designs have earned an excellent reputation among pilots, builders, and aviation authorities for their durable all-metal construction, normal flight characteristics, reliability, and low maintenance." -- <u>EAA Sport Aviation magazine</u>

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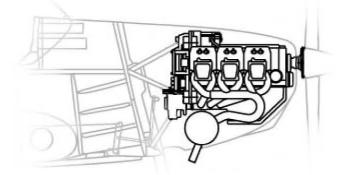
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Z O D I A C



The **Jabiru 3300** is a six-cylinder direct-drive air-cooled aircraft engine from Jabiru Aircraft Pty. Ltd. (Australia).

ENGINE DETAILS: JABIRU 3300

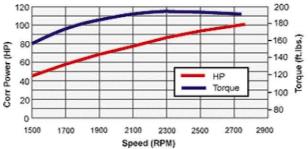
- Four Stroke, 3300cc (200 cubic inches)
- 6 Cylinder Horizontally Opposed
- Weight: 180 lbs. (81 kg.) incl. Exhaust, Carburetor, Starter Motor, Alternator & Ignition System & Accessory pack.
- Machined Aluminum Alloy Crankcase
- Overhead Valves (OHV) Push Rod Operated
- Wet Sump Lubrication
- Direct Propeller Drive (no reduction unit)
- Dual Transistorized Magneto Ignition
- Alternator 20 Amp
- Electric Starter
- Mechanical Fuel Pump
- Naturally Aspirated One Pressure Compensating Carburetor



Predicted Performance Points:

- 120 hp @ 3300 rpm
- 110 hp @ 3000 rpm
- 100 hp @ 2750 rpm
- 93 hp @ 2551 rpm
- 90 hp @ 2475 rpm
- 80 hp @ 2200 rpm

Engine Performance Curves: Jabiru 3300













Specifications: Jabiru 3300 A

Displacement:	3300 cc. (200 cu.in.)		
Bore:	97.5 mm.		
Stroke:	74 mm.		
Compression:	8.3 : 1		
Prop Rotation:	Clockwise		
Firing Order:	1 - 4 - 5 - 2 - 3 - 6		
Power Rating:	100 hp @ 2750 rpm (see above)		
Fuel Consumption @ 75%:	5.0 US Gal/Hour (gph)		
Fuel:	100/130 Avgas or 92+ octane Mogas		
Oil:	Aeroshell W100 (or equivalent)		
Oil Capacity:	3.5 qts. (3.75 <i>l</i> .)		
Spark:	NGK D9EA (common automotive)		

Some highlights:

- Engine TBO: The engine has a published TBO of 2,000 hours.
- The case & internal parts are machined from solid steel bar or aluminum billet. The oil sump is only cast part.
- Ignition: Dual separate magnetos with redundant distributors & plugs. No points! No battery power required for operation. Spark plugs are NGK and commonly available.
- All engines include: Starter, Exhaust System, Alternator, Regulator, Starter Solenoid, Cooling Ducts, Prop Guides, Oil Cooler Kit, Engine mount Bushings and mounting hardware.
- Warranty: One year from delivery. Delayed warranty start available on request .



CH 601/650 Updates

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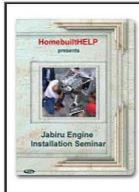
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For more information about the Jabiru 3300 engine:



Jabiru Engine Installation Seminar on DVD

This video was filmed on location at a hands-on workshop style seminar provided by the technicians at JabiruUSA. The purpose of the seminar was to train those aircraft builders that have purchased Jabiru engines how to properly install their firewall forward components. The Zodiac CH 601 and STOL CH 701 aircraft were used as the classroom demonstration examples for the engine installation.

Presented by <u>HomebuiltHELP.com</u>, this affordable DVD video is nearly 2.5 hours in length and is divided into various video chapters to make navigation and review of desired sections fast and easy. <u>Click here</u> for more info and to order a copy.

• <u>Click here</u> for pricing and availability information on the Jabiru firewall-forward engine packages for the ZODIAC.

NOTE: All above information is subject to change and revision without prior notice. Source: JABIRU. The above resources are provided for informational purposes only - Zenith Aircraft Company does not manufacture or directly support engines installed in the ZODIAC kit aircraft.

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