

AIRCRAFT MANUFACTURED BY HYDROPLANE



The Samara Hydroplane Aircraft Factory was established in 1995 as an institution specialized in development and manufacturing of light aircraft for private and general aviation.

The most popular product of the firm is Corvette L and Corvette J three-seat amphibian aircraft. During 12 years of the successful operation in Russia and overseas they underwent a number of improvements, have received excellent references from the operators and have acquired a deserved reputation of robust, reliable, simple in operation and economically effective aircraft. In the year 2001 Corvette L has received a certificate of the International Aviation Committee' Aviation Register type.

In 2006 the Corvette has received a supplement to the certificate of the International Aviation Committee' Aviation Register type enabling it to be used as a trainer.

The Corvette is manufactured production-run. At present time near 80 aircraft of this model fly in Russia and abroad.

The Corvette has unique inherent running ability giving it wonderful possibilities to perform such tasks as patrolling, monitoring of water and ground surfaces, investigation of pipelines and power transmission lines. The Corvette has a highly reliable structure with a large safety margin. The body, which is made of a high-strength plastic, is proof against the environment, is durable and easily maintainable. The pilotage safety is assured by stable aerodynamic scheme (the aircraft does not fall down to spin, its lift/drag ratio is 10), by presence of two operation proved certified engines (Jabiru 2200, Australia, or Rotax 582, Austria) and by a possibility to land on concrete, dirt, grass or water. The aircraft is simple in its mastering – retraining of an experienced pilot takes 5 to 10 hours (the main issue is to learn how to fly from water); new pilots master the Corvette within 20-30 hours. The maintenance does not require engagement of costly qualified special-

ists. The super-short landing and take-off distances, high rate of climb, good airlift, roomy baggage hold, almost all-around view from the cockpit, long range ability without refuelling and extremely cheap operating costs are far from complete set of characteristics of this aircraft.

The Corvette is an aircraft for all. The designers have succeeded in obtaining a rare combination of simplicity, reliability and excellent characteristics. As a result, both professional and amateur pilots get a real enjoyment to fly this machine.

At present time Hydroplane has finished the flight test and started the series production of

the multi-purpose aircraft SkyWind (further development of the agricultural project Cicada). So far the SkyWind is manufactured in a two-seat option (agricultural and multi-purpose) powered by two Jabiru-2200 engines. The aircraft is designed for patrolling, monitoring of water and ground surfaces, investigation of pipelines and Power Transmission Lines, delivery of mail and aerial photography. The first batch of the aircraft of this type in the agricultural option was ordered by Ukrainian and Russian partners of Hydroplane. Our foreign customers have also expressed their interest in purchasing this aircraft both in its agricultural version and as a platform for aerial photogra-

Performance specification of Corvette aircraft

Aircraft modification	Unit of measurement	Corvette LJ	Corvette L
Wing span	m	10.7	10.7
Length	m	6.8	6.8
Height	m	2.4	2.4
Wheelbase	m	1.7	1.7
Maximum take-off weight	kg	750	750
Weight of empty aircraft	kg	445	375-460
Fuel margin	l	160	100/120
Crew (pilot + passengers)	persons	1+2	1+2
Maximum speed of level flight	km/h	180	165
Cruising speed	km/h	140	120
Climbing capacity	m/s	9	7
Practical ceiling	m	3000	3000
Fuel flight-range ability	km	900	450-570
Take-off distance (land/water)	m	70/90	70/90
Engines		2 x Jabiru 2200	2 x Rotax 582
Power	horse power	2 x 85	2 x 64
Fuel	GOST	AI-95	AI-92
Engine oil		AeroShell 5W30 SAE two-stroke TSC-3 Super	
Total fuel consumption	l/h	20	25
Ambient temperature	°C	from -20 to +35	from -20 to +35
Maximum wind speed			
headwind	m/s	12	12
crosswind	m/s	4	4
Navigability (wind-induced wave) depending on the pilot's experience	m	0.5-1.5	0.5-1.5

phy equipment. Next year it is planned to launch the series production of a four-seat cargo-and-passenger version with two Jabiru-3300 engines.

When defining the structure-and-layout configuration of the SkyWind, the engineers have considered the experience of the development, certification and preparing the production of the Corvette amphibian airplane.

The fuselage and the empennage are made of three-layer fibreglass panels resistant to atmosphere and chemical compounds. Inside the fuselage along its longitudinal axis there is a power centre sill inside of which there are control system rods. The sill is made of a composite material, which has good kinetic energy absorption capacity in direct stroke. One of its functions is to protect the pilot in case of emergency.

In the agricultural version (for spraying works) the lower part of the fuselage cargo compartment has a chemical tank with the capacity of 250 l and hermetically separated from the cockpit. In the multi-purpose option the cargo compartment accommodates freights or special equipment.

The landing gear has three legs with the steered nose wheel and brake rear wheels. The front leg is installed on the front edge of the centre sill, the main wheels of the landing gear - on a metal bow spring (titanium or steel). The aircraft has hydraulic disk brakes.

Jabiru-2200 is a 85 horse powers certified four-stroke aviation engine made by the Jabiru Aircraft (Australia). At present time this is one of the most popular engines as per its price/quality balance.

In case of failure of one of the engines, the aircraft has a sufficient thrust-to-weight ratio to fly on single engine. This increases safety, and in addition the effective wing air blow-off by the propellers assures a slow speed and short distance during taking off. The petrol tanks are located in the wing centre section and far away from the cockpit.



In Russia there more than a dozen of the companies offering light aircraft for sale. But none of them may boast of complete set of licences and certificates, available developed production and design office, 10-year experience of work, extensive operation statistics, real series production and complete load of

Performance specification of SkyWind aircraft:


Specification	Value
Maximum take-off weight, kg	850
Weight of empty aircraft, kg	500
Take-off speed, km/h	75
Maximum speed, km/h	180
Maximum climbing capacity, m/s	9
Take-off distance, m	120
Landing distance, m	100
Runway characteristic	Concrete, soil
Engine	2 Jabiru-2200 engines
Power, horse power	2x85
Used fuel	Motor petrol with the octane number of not less than 95
Hourly consumption, kg/h	15.5

production capacities. Unlike Hydroplane, the overwhelming majority of light aircraft building institutions in Russia just strive for that.

The Hydroplane aircraft manufacture is located in Samara; the trading representative office is in Moscow that assures the operator's closeness to the manufacturer, i.e. to the source of spare parts, services and consultations. Thanks to the aircraft conceptual simplicity and high quality standards at correct operation only few operators apply for spare parts or repair. That is just the reason why the cost of the aircraft operation is really low.

The manufacturer gives a warranty for all new aircraft and also provides after-sale support (maintenance, repair, spare parts supply, consultations, upgrading, distribution of bulletins and pilots/technicians training).

The manufacturer's certified specialists perform any complex repairs of the aircraft either at the factory or at the aircraft location base. Certified repairs of Jabiru engines is performed at the factory in Samara. For October 2007 it is planned to start new aircraft sales, repair and maintenance centre at the base of the Hydroplane representation in Moscow.

All aircraft of Hydroplane are designed and manufactured in Russia according to Russian aviation industry standards and regulations (Aviation Rules of the Russian Federation, Part 23 - stricter than the Western rules) and JAR VLA and are destined for operation in conditions of neither air fields nor runways. 



Hydroplane LLC (Aircraft Designer's Certificate No. R-50 of 30.12.1997, Licences No. No. 2554, 2556, 2558 for development, production and repair as of 10.07.2003, Production Approval Certificate OP 87-PVS of 2005).

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