

SHOCK•CUB



Dlin Aviation s.r.o.



The ultimate STOL aircraft

A NEW
DYMAGIC
DIMENSION



When Shocking
“Dynamic” and “Magic”
Hyper STOL Performances
simply meet together.

MADE FOR ADVENTURE



The roomy, comfortable, reinforced cockpit offers extraordinary sense of safety and a fantastic visibility when involved in remote situations or STOL activities.

The “new wing”, with a customized Hyper STOL airfoil and the optional Carbon slats and vortex generators, provide a significant increase of lift coefficient and lower stall speed.



The new “double slotted” flaps (70% bigger than in the past), the custom made micro VG installed inside the vane, the larger ailerons (40% bigger), dramatically increase the efficiency of the wing at very low speed.



The “new landing gear”, with oversized outboard shock absorbers is designed to tame the landings. Load and drop tested up to 1000 kg and 120 cm above the ground without any damage, virtually eliminates the touchdown rebound.





OUR DYNAMAGIC VISION

What Bushflying is and what it represents, true, serious Bushflying, is easily enough stated. It is in the first place, in our "Vision", an "Art". To be able to land "anywhere", by choice or for necessity in ridiculously small spaces, with maximum safety, at very low speeds, with a landing system that enables you to overcome almost any obstacle, in a manner which is almost unknown, cannot be underestimated. We are speaking of flying and operating on any territory with an effectiveness never before seen, in contact with nature, whenever desired, and practically without limits, leaving the pilot free to follow and express even his most primordial instinct, with the greatest safety possible and with great versatility. So for us, for our Vision, this style of flying is also "Art". But art isn't enough. Poetry is not enough. Bushflying is a serious thing and the technical and structural aspects must never be neglected, if we truly want to practice this wonderful type of flight.

A NEW "WORD" TO DESCRIBE THE ASTONISHING PERFORMANCES OF THE SHOCK CUB

THE NEW FUSELAGE FRAMEWORK

Since the beginning we proceeded from the optimal Savage Cub-S, reinforcing and refining the Fuselage Framework, increasing by several centimeters the cockpit height, improving the accessibility and the general ergonomics on board, which now is more advantageous. We have increased the surface of the already generous Cub-S Elevator and Rudder, fundamental elements in the "ultraslow" flight. The Stabilizer vertical travel, due to the new Jack Screw Trim System, has been increased to balance the new Hyper Stol Wing angle of incidence.

On request, the cockpit can be decorated with Carbonfiber details, such as, Instrument Panel, the new Floorboards, the Kevlar reinforced light weight Seats. New Throttle levers are installed in the baseline. The basic Engine Mount for the Rotax is a dynafocal type and the Engine Cowling can accommodate up to 180 hp engines such as Lycoming / Titan or other make, on request.



THE NEW WING AND NOT ONLY

The Wing is totally new and is equipped with new customized Hyper Stoll profile. The new structure has allowed us to test the wing up to above 700 Kg MTOW x 6g (Ultimate Load) with no residual permanent deformations. The wing tip is shaped for the best contribution to Lift and it allows the Ailerons to keep their efficiency to extremely low speed. The new Double Slotted Flaps, have made possible to increase tremendously the Lift Coefficient providing excellent performance in landing. The pitching Moment generated by the New Flaps allows the Pilot to "see" exactly the landing area, as the nose will be lower than usual, with the final positive consequence of an improved safety for this kind of flying. The new Carbon fiber Slats have been extensively developed and tested with the aim of minimizing the Cruise Speed reduction and, at the same time, through pivoting according to the airflow, slowing down the Airplane to unbelievably low speed. Being fixed and not extendable with spring mechanism, there is not risk of having an half Wing with Slats extended and an half Wing with Slats retracted at the approach, in turbulence, during turning or sideslip, or near the ground. With the Slats a different type of landing can be performed, with the nose very high on the horizon, ridiculous approach speed and contact with the ground with the tail wheel first.

The braking action will also be amplified by the Main Landing Gear damping System which, dissipating the energy due to the high vertical deceleration, will subtract longitudinal kinematic energy to the Airplane and reduce to a minimum the necessary landing distance.

THE NEW LANDING GEAR

The Landing Gear is totally new, already reinforced is equipped with ultra-performing Shock Absorbers in three points. The Front and Rear Suspensions innovative Design shows an unimaginable shock absorbing capability and the Drop Tests have shown that with a weight of 1000 kg and an height of 120 centimeters the structure keeps its full integrity. Landing on a bumpy surface it will never be, since today, easier. The Landing gear position has been generously moved forward to allow an exceptional breaking capability without the risk of overturning.

SAFETY FIRST OF ALL

The new Slats make spin, in practice, almost impossible, while make easy to control and less dangerous stall. In fact the Shock Cub stall is so unnatural and its stall angle of attack is so high that would never be reached by chance or by error at the approach. All this becomes an additional safety for the Pilot. From this standpoint, in fact, if to an aerodynamic profile "spin proof" are added a structurally improved Wing, a Fuselage structure more robust, an iper-energy absorbing Landing gear and well sized Bush Wheels, besides of really small landing spaces, the Pilot will benefit of a favorable situation in all the most critical phases of flight, namely approach and landing, independently from the kind of flight, standard or extreme Bush Flying, or from his ability. Finally, in the remote instance of a descent with the optional ballistic parachute, the impact will be less problematic because of the Airplane damping system, a factor that should not to be undervalued.

Our new Shock Cub is designed for all this and much more. We could have illustrated it helping your fantasy visualizing operative situations full of "dymagic" emotions but we choose to leave to each one of you the freedom of imagining, after this reading, the infinite possibilities that this new Zlin Aviation Airplane is capable to offer...

**WHY GO FAST? IT'S
SO MUCH MORE FUN
TO FLY SLOW
AND LAND SHORT...**

SHOCK IDENTITY



The “oversized tail” section and a very effective trim system give to the pilot the possibility to fly at high “AOA” and different CG at extremely low speed, with full control and without risks.

The “engine bay” can accommodate different engines from the standard Rotax 912 uls (100 hp) up to the Rotax 914 (115 hp), Rotax 915 (>135 hp) and the Titan 340 Stroker (180 hp).



The optional “carbon fiber instrument panel” with satin aluminium insert, can receive any kind of EFIS system up to 7” dimension. We can prepare custom instrument layouts according to customer desires.

The brake system is extremely important for short landings. We experiment any kind of new technology in this area and we are capable to offer the best in terms of brake efficiency, durability and lightness.



CUSTOMIZE YOUR SHOCK • CUB

AERODINAMIC PACKAGE (carbon slats and full kit of vortex for tail, flaps and wings)
CARBON PACKAGE (carbon kevlar seats, instrument panel, floorboards, wing tips)
PERFORMANCE PACKAGE (custom Rotax turbo 120 hp upgrade and 3 blade carbon propeller)

CHOOSE BETWEEN 3 MAIN "OPTIONAL PACKAGE" AND SEVERAL OTHER OPTIONS. DEDICATED PAINT SCHEMES ARE AVAILABLE ON DEMAND!



**ALPHA
DESIGN**



**RUSTY
DESIGN**



**SAFARI
DESIGN**



ENGINES	Rotax 912 ULS 100hp/ Rotax 914 115 hp
WING SPAN	900 cm (354,3")
LENGTH	684 cm (269,3")
HEIGHT	225 cm with Alaskan Bw 29" (88,5")
WING SURFACE AREA	15,21 mq (163,7sq/ft) (no slats version)
WING CHORD	169 cm (66,5") no slats
CABIN WIDTH	69 cm (27,1")
MAX TAKE OFF WEIGHT	from 472,5 kg (ULM version) to 600 kg (LSA version)
WEIGHT UNLOADED ULM-LSA BASIC VERSION	from 339 kg (745 lbs)
LOAD FACTOR	+6 -3 (tested at 680kg MTOW/ 1500 lbs)
VNE	185 km/h (115 mph) with slats- 210 km/h (130 mph) no slats
MAX SPEED S.L. (WITH SLATS)	180 km/h (112 mph) with slats
CRUISING SPEED 75%	145 km/h (90 mph) Rotax 100 hp/ 160 km/h (100 mph) Rotax 115 hp
CLIMB RATE	5 mt/s (1.000 ft/m) Rotax 100 hp/ 6 mt/s (1.180 ft/m) Rotax 115 hp
MINIMUM FLIGHT SPEED WITH FULL FLAPS (MTOW 600 KG)	37 km/h (23 mph)
MINIMUM FLIGHT SPEED WITH FULL FLAPS (SINGLE PILOT)	29 km/h (18 mph)
REQUIRED TAKE OFF SPACE (SINGLE PILOT)	< 35 mt (115 ft) Rotax 100 hp/ <30 mt (98 ft) Rotax 115 hp
REQUIRED LANDING SPACE (SINGLE PILOT)	< 18 mt (58 ft)



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