This is the result of over 20 years of experience in designing energy-efficient motor-planes, which follow the glider philosophy. The aircraft shapes are so clean that they enable flying with the smallest of power and noise as well as lowest fuel consumption, when keeping the performance on the same level or even better. Approved for intentional spins and Night VFR, Virus SW 121 has the best flight characteristics in its category.

Structural perfection is the sum of knowledge acquired in making of 1300 aircraft of the same family of products. Certified and used in harshest conditions all over the world, the Virus SW 121 fulfils expectations of the most demanding customers, including the Indian Ministry of Defense, that acquired almost 200 Pipistrel aircraft for the official basic trainer of Indian Air Force, Navy and National Cadet Corps.

DESCRIPTION

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The flight characteristics of the Virus SW 121 are a testament to the aircraft with simple, extremely efficient, environmental-friendly features, but at the same time reaching superb performance that can satisfy even the most demanding pilots. Due to its advantages, excellent characteristics, low running costs and affordability, it is the best choice on the market as an advanced trainer for the training organizations.

The SW 121 features the best equipment in the category, including:

- dual-screen glass cockpit
- full-featured autopilot
- high-speed and the longest range in its category
- full airframe ballistic parachute rescue system
- certified engine capable of running on automotive fuel
- certified hydraulic constant speed propeller
- approval for intentional spins
- approval for night VFR
- airbrakes for rapid descent
- glider towing

It is important to highlight SW 121 key **outstanding characteristics:**

- **Fast and economic performance:**
  It is the fastest, most capable and the most economic aircraft in the CS-LSA category. Its speed performance allows to fly at IFR speeds in/near complex airspaces and procedures, so it can be used for private use and training also at busy airports with airliners without slowing down the other traffic.
- **EASA Type-Certificate:**
  It is the first and the only EASA Type-Certified (no restrictions, category "normal") aircraft in CS-LSA category for Night VFR operations, intentional spins and glider-towing, the only one with an autopilot, dual redundant ADAHRS units and airbrakes. It can be used for commercial operations and it is the ideal solution for PPL training.
- **3D printed parts:**
  It is the first small aircraft in history to be type certified with 3D printed parts. The Virus SW 121 enables the flight schools to substitute their multi-aircraft system, where they have to use at least one aircraft for basic training and another for advanced training, for one aircraft only. By combining the capability typically obtained with several aircraft into a single one, they can drastically lower the purchase price and initial costs of the training fleet.
- **Multiple learning purposes:**
  It can be used for different learning purposes: as a very simple initial trainer at the beginning of the process, until more advanced systems – such as constant speed propeller, negative flaps, airbrakes and autopilot – decide to be included. The instructor can slowly increase the difficulty of subjects in the later stages of training by the gradual addition of new systems and options which the aircraft is certified for (intentional spins, longer routes and the use of auto-pilot, also during the night thanks to the night VFR approval etc.).
- **"En-route IFR training"**
  Virus SW 121 is packed with state-of-the-art navigation and communication equipment: as such it can also be partially used for "en-route IFR" training in several countries This makes the Virus SW 121 the only 2-seat aircraft in the market which enables training from the simplest beginnings to the difficulty of a twin-engine aircraft for obtaining higher pilot licences.
- **Glider towing:**
  It is also certified for glider towing, which makes it even more useful, in cases where it is even more important that the flight hours on an aircraft can be fully used.

TECHNICAL CHARACTERISTICS

MODEL	VIRUS SW 121 EASA LSA
ENGINE	Rotax 912 S3, EASA certified engine
max power (with 2 carburettors)	100 hp, 73.5 kW
PROPELLER	2-blade Hydraulic CS MTV-33-1-A/170-200 EASA certified
DIMENSIONS	
length	6.45 m, 21.16 ft
wingspan	10.70 m, 35.10 ft
height	2.06 m, 6.75 ft
wing area	9.51 m², 102.4 ft²
mean wing chord	0.898 m, 2.95 ft
aspect ratio	12.04
positive flaps	0°, +9°, +20°; marked (0), (+1), (+2) respectively
negative flaps	-5°; marked as (-)
center of gravity	25% – 33% MAC
WEIGHTS	
design empty weight	349 kg, 769 lb
max take off weight (MTOW)	600 kg, 1323 lb
design useful load	251 kg, 553 lb
max baggage weight	25 kg, 55 lb
fuel tanks capacity	2 x 50 l
useful fuel	2 x 49 l
PERFORMANCE	
never exceed speed, V_{NE}	163 KTAS
max structural cruising speed, except in smooth air, V_{NO}	120 KIAS
max operating manoeuvring speed, V_A	100 KIAS
max flaps extended speed, V_{FE}	81 KIAS
max airbrakes extended speed, V_{AE}	100 KIAS
stall without flaps	50 KCAS
towing limitations	glider up to 600 kg, to meet 500 m total take off distance (over 15 m obstacle)
best climb speed	78 KIAS
max climb rate	1050 ft/min
take off distance at SL	160 m
take off distance over 15 m obstacle at SL	320 m
maximum take-off altitude	10,000 ft MSL
maximum operating altitude	16,000 ft MSL
permitted fuel	AVGAS, MOGAS or car fuel (min RON 95; EN228 Premium or Premium plus with max. 10% Ethanol)
fuel consumption at 2000 ft. 75% PWR cruise speed	18.4 l/h
endurance @4000 ft., 65 % power)	5 h 33 min (+30 min reserve)
range distance (+ 30 min reserve, @4000 ft., 65 % power)	1189 km / 642 nm
noise level (ICAO Annex 16, Chapter 10)	70 dB(A) (measured)
flight load factor limits	4.0 g+, 2.0 g-

Note: Pipistrel reserves the right to revise this data sheet whenever occasioned by product improvement, government/authority regulations or other good cause.