

JMB Aircraft VL-3 Evolution Model Guide

The JMB Aircraft VL-3 Evolution is a single-engine composite two-seat, side-by-side aircraft with retractable tricycle gear, built for recreational and sport flying. This guide uses the flight manual for the VL-3E-1 with Rotax 912ULS (aircraft OK-CUA78, issued 2.6.2023). Figures may differ on other examples. No registry family data was available.

KEY TAKEAWAYS

- Two seats, 600 kg max takeoff weight, 360 kg standard empty weight, 15 kg baggage limit. VFR only, not approved for aerobatics.
- Rotax 912ULS rated 100 hp at takeoff and 5500 rpm max continuous. The manual says this engine is not certified as an aircraft engine.
- Lift-off at about 43 kts, climb at 60 kts, best climb at 75 kts. Stall is 95 km/h IAS clean and 82 km/h IAS in landing flaps.
- Hydraulic retractable gear with a manual emergency pump. Check the gear system, fuel quality and weight/CG figures before buying.

AIRFRAME AND LAYOUT

Carbon and carbon-Kevlar composite fuselage with integrated seats. The wing is single-spar with a carbon-foam sandwich skin, and the tail is built the same way. Wingspan is 8.44 m, length 6.2 m, wing area 9.8 m2. Tricycle gear with a steerable nosewheel. Flaps are linked to the gear, so extending flaps with the gear up sounds a warning horn.

GEAR HYDRAULICS: WHAT TO CHECK

The gear is hydraulic, with a maximum operating speed of 150 km/h. An extension cycle runs 30 s, then a red HPU light flashes and a Reset press restarts it. If three green lights do not show, a hand pump (min. 50 cycles) extends the gear. After any such event the manual says to inspect the gear system for the cause.

FUEL AND ENGINE CARE

Two wing tanks of 59 L each (15.6 US gal each). Approved fuels include unleaded RON 95 and EN 228 Super mogas. AVGAS 100 LL is for use only when nothing else is available, because it increases valve seat wear and deposits. Do not use fuel with more than 10% ethanol or 5% toluene. Run oil above 100 °C for at least 10 min each flight day.

SPECIFICATIONS

Seats	2
Engine Power Hp	100
Wingspan M	8.44
Length M	6.2
Wing Area M2	9.8
Empty Weight Kg	360
Max Takeoff Weight Kg	600
Fuel Per Tank Gal	15.6

PERFORMANCE

Liftoff Speed Kts	43
Climb Speed Kts	60
Best Climb Speed Kts	75
Max Continuous Rpm	5500
Stall Flaps Up Kmh	95
Stall Landing Flaps Kmh	82
Touchdown Speed Kmh	80
Max Crosswind Kts	25

V-SPEEDS

Vne Kmh	315
Va Kmh	190
Vno Kmh	250
Vfe Kmh	125
Vle Kmh	150
Vs0 Kmh	82
Glide Speed Kmh	140
Final Approach Speed Kmh	120

WEIGHT & BALANCE

Empty Weight Kg	360
Max Takeoff Weight Kg	600
Max Baggage Kg	15
Cg Forward Limit Mm	335
Cg Aft Limit Mm	492
Max Crew Full Fuel Kg	139
Min Crew Weight Kg	65

SAFETY NOTES

- The manual states the Rotax 912ULS was not certified as an aircraft engine and may fail at any time. The pilot is fully responsible for the consequences.
- Aerobatics, intentional spins, stalls with power and side slips are prohibited. VFR flight only.
- The placard says the product is not subject to Czech CAA approval and is operated at the user's own risk.