ROTORWAY EXEC 90 Model Guide

ROTORWAY EXEC 90 is a two-seat, piston-powered home-built helicopter. It has a water-cooled, four-stroke RI 162 engine of 162 cu.in. Gross weight is 1500 lbs, empty weight is 925 lbs, and fuel capacity is 17 U.S. gallons. The manufacturer's warning says the buyer assumes all risk of construction and operation.

KEY TAKEAWAYS

- Two seats; gross weight 1500 lbs, empty 925 lbs, equipped useful load 500 lbs, fuel 17 U.S. gallons.
- Normal cruise 95 mph, maximum airspeed 115 mph, service ceiling 10,000 feet, range 180 miles (2 hrs).
- Pilot plus passenger is limited to 400 lbs, with a 210 lb maximum each. Solo flight is from the left seat only.
- This is a home-built aircraft: the seller gives no warranties, so verify build quality and weight-and-balance records.

OPERATING LIMITS

Fuel is 92 octane minimum auto fuel or 100LL. Maximum airspeed is 115 mph at sea level; reduce it 2 mph for each 1000 ft of density altitude. Limits are 75 mph in turbulent air and 20 mph sideways or rearwards. Out-of-ground-effect hovers are prohibited for Exec pilots under 150 hours.

WHAT TO INSPECT

The maintenance manual sets 100 HR airframe inspections and a 2000 HR recommended change-out. About 80% of aircraft weight goes through the rear gear, so check it closely. Keep the engine mount rubber (50 HR inspection) free of oil and grease. Replace a skid tube if a flat wear area exceeds 1/2 inch wide. Tail rotor belts have a 250 HR change-out and the blades 500 HR.

WEIGHT AND BALANCE

Empty weight is 925 lbs, maximum takeoff weight is 1500 lbs, and maximum variable load (pilot, passenger, fuel, ballast) is 525 lbs. Solo flight needs ballast on the front passenger skid. Dual flight needs ballast on the rear mount tube. A static hang test, done with no fuel and results within 1/2 degree, is required before first flight.

SPECIFICATIONS

Seats	2
Gross Weight Lbs	1500
Empty Weight Lbs	925
Useful Load Lbs	500
Fuel Capacity Gal	17
Max Pilot Weight Lbs	210
Max Passenger Weight Lbs	210
Max Pilot And Passenger Weight Lbs	400

PERFORMANCE

Hover In Ground Effect Ft	7000
Hover Out Of Ground Effect Ft	5000
Service Ceiling Ft	10000
Range Miles	180
Normal Cruise Mph	95
Max Airspeed Mph	115

V-SPEEDS

Max Airspeed Sea Level Mph	115
Max Airspeed Turbulent Air Mph	75
Max Sideways Rearward Mph	20
Autorotation Approach Mph	65

WEIGHT & BALANCE

Empty Weight Lbs	925
Max Takeoff Weight Lbs	1500
Max Variable Load Lbs	525
Min Solo Pilot Weight Lbs	150

SAFETY NOTES

- Engine failure above 500 feet AGL: enter autorotation at about 65 mph and hold 100% rotor RPM (520 RPM).
- Do not attempt an air restart until a safe autorotation is established.
- Limit engine operation between 2500 and 3000 RPM during run up and run down because of main drive belt resonance.

AI-aggregated guide for the ROTORWAY EXEC 90 · sources: EXEC 90 FLIGHT MANUAL (#102559) · Rotorway International Exec 90 Maintenance Manual (#101764) · generated 2026-10-20 · Reference only, not for flight. Check the original documents before relying on this guide.