

R66[®] TURBINE HELICOPTER



R66 TURBINE

The 5-place R66 Turbine is Robinson's largest and most powerful helicopter. Like the R22 and R44, the R66 is built to be exceptionally reliable, economical and easy to maintain while performing as well or better than its more expensive competitors.

The R66 includes many of Robinson's signature design features including a two-bladed rotor system, T-bar cyclic and open cabin configuration. What distinguishes the R66 are its fifth seat, spacious baggage compartment and the Rolls-Royce RR300 turboshaft engine.

Designed specifically for the R66, the RR300 is powerful, lightweight, and highly reliable. An Engine Monitoring Unit (EMU) continuously records gas generator/compressor RPM, power turbine RPM, engine torque and measured gas temperature (MGT). The RR300 operates on readily available Jet A fuel and provides increased reserve power, additional payload, and improved altitude performance.

With continued focus on safety, the R66 meets the latest FAA crash-worthiness regulations including energy absorbing seats and a bladder fuel tank.





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TURBINE



FEATURES

- ◆ Two-bladed rotor system eliminates the need for lag hinges, dampers, and hydraulic struts.
- ◆ Proven aluminum and stainless steel construction of main rotor blades minimizes environmental wear and tear.
- ◆ Hydraulic power controls eliminate stick shake and feedback forces.
- ◆ Center positioned T-bar cyclic enables a comfortable grip position and allows trouble-free entry and exit of the cabin.
- ◆ Left side flight controls are removable.
- ◆ Transmit, intercom, and memory channel radio controls are integrated into cyclic grip.
- ◆ Voice-activated intercom eliminates the need to use intercom switches during doors-on flights. Intercom switches are included for doors-off flights.
- ◆ Leather seats
- ◆ Rotor brake allows the pilot to stop the rotors quickly, reducing shutdown time and risk of injury to passengers and ground personnel.
- ◆ 18 cu ft, 300 lb capacity baggage compartment
- ◆ LED anti-collision and navigation lights
- ◆ Dual HID landing lights
- ◆ External power receptacle

STANDARD AVIONICS

- ◆ 8-hole instrument panel
- ◆ Garmin GMA 350H audio panel
- ◆ Garmin GTR 225B COM radio with 8.33 kHz channel spacing
- ◆ Garmin GTX 327 Mode C transponder



Shown with optional artificial horizon, directional gyro, turn coordinator, and fire extinguisher

OPTIONAL AVIONICS

- ◆ A variety of Garmin avionics including easy to reach and see touchscreen navigators
- ◆ Garmin and Aspen Primary Flight and Multifunction Display systems provide instrumentation, moving map navigation, and additional situational awareness including traffic, weather, and terrain.

Genesys HeliSAS autopilot developed specifically for light helicopters



*Shown with optional G500H PFD/MFD,
GTN 750 GPS/COM/NAV, autopilot, radar
altimeter, and fire extinguisher*



Shown with optional air conditioning, Bose A20 aviation headset, and rear center console

INTERIOR UPGRADES

- ◆ Ceiling-mounted air conditioning features front and rear vents that circulate cool air throughout the cabin. The system weighs 43 pounds and has a 17,000 BTU/hr cooling capacity.
- ◆ Bose A20 aviation headsets with active noise reduction and Bluetooth interface
- ◆ Rear center console provides secure storage for travel essentials. The center seat can be re-installed when needed.

R66 TURBINE MARINE

Outfitted with pop-out floats, the R66 Turbine Marine offers an additional level of safety for over-water travel.

Designed for emergencies, the six-chamber floats inflate within 2-3 seconds of activation. A lever on the pilot's collective releases pressurized helium from a tank located under the aircraft's right rear seat. The activation lever uses a mechanical pull cable and does not rely on an electrically actuated system for inflation. Floats may be activated and flown at speeds up to 80 knots.

The installation adds approximately 65 pounds to the helicopter's empty weight. When not in use, floats roll-up and stow in protective covers along the aircraft's landing skids. The streamlined, low profile design minimizes drag and allows for easy entry and exit of the cabin.

MAINTENANCE

Pop-out floats require preflight verification of the helium tank pressure, annual leak checks, and emergency deployment tests every three years.

The R66 Turbine Marine with floats inflated is approved for periodic training and limited amphibious use at reduced gross weight.





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SERVICE

Factory-trained technicians are available worldwide at R66 service centers.

No scheduled maintenance required between 100-hour inspections. Main and tail rotor drive systems use maintenance-free flexible couplings. Primary controls actuate by push-pull

tubes and bell-cranks eliminating cables and pulleys. Teflon-lined or sealed bearings eliminate grease fittings.

The Time-Between-Overhaul (TBO) is 2000 hours or twelve years for the airframe and 2000 hours or 3000 start cycles for the engine. Life-

limited components have approved service lives of at least 2000 hours.

WARRANTY

The R66 carries a two-year or 1000-hour limited aircraft warranty.





STANDARD EQUIPMENT

- ◆ Hydraulic power controls
- ◆ Bladder fuel tank
- ◆ Integrated oil filter with bypass indicator
- ◆ Engine air filter with bypass indicator
- ◆ Main gearbox oil filter
- ◆ 160 amp starter generator
- ◆ Engine compressor rinse nozzle
- ◆ Electronic engine monitoring unit (EMU)
- ◆ Engine anti-ice system
- ◆ Cabin heater and defogger
- ◆ Rotor brake
- ◆ Floor and hand intercom switches
- ◆ Avionics master switch
- ◆ Tinted windows
- ◆ Leather seats
- ◆ 3-point shoulder harnesses
- ◆ Pilot-side adjustable pedals
- ◆ Door locks
- ◆ Belly hard point
- ◆ LED anti-collision and navigation lights
- ◆ Dual HID landing lights
- ◆ LED panel and map lights
- ◆ Tow cart adapter
- ◆ Ground handling wheels
- ◆ Rotor blade tie-downs
- ◆ Windshield cover
- ◆ Travel bag

STANDARD INSTRUMENTS

- ◆ Airspeed indicator
- ◆ Altimeter
- ◆ Rotor/engine dual tachometer
- ◆ Vertical speed indicator
- ◆ Magnetic compass
- ◆ Torque meter
- ◆ N1 tachometer
- ◆ MGT gage
- ◆ Oil temp and pressure gages
- ◆ Fuel gage
- ◆ Ammeter
- ◆ Digital OAT gage/voltmeter
- ◆ Hourmeters
- ◆ Quartz clock

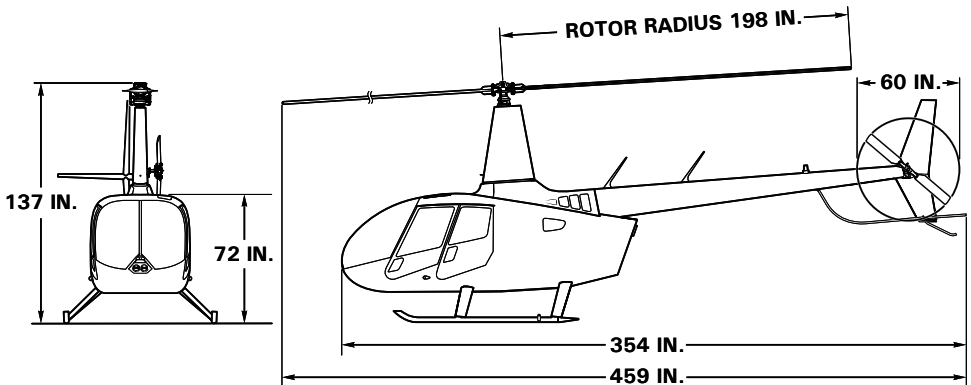
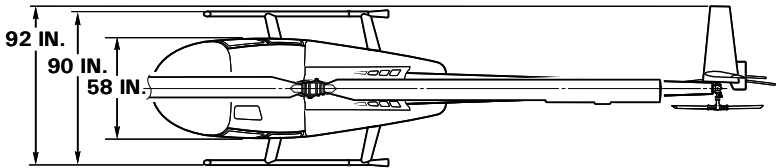
ANNUNCIATOR LIGHT PANEL

- ◆ Engine fire
- ◆ Low fuel
- ◆ Low oil pressure
- ◆ Low rotor RPM (light & horn)
- ◆ MR gearbox temp/press
- ◆ MR gearbox chip
- ◆ TR gearbox chip
- ◆ Engine chip
- ◆ Anti-ice
- ◆ Generator
- ◆ Fuel filter
- ◆ Cowl door
- ◆ Air filter
- ◆ EMU

SPECIFICATIONS

	R66 Turbine	R66 Turbine Marine
Engine	Rolls Royce RR300 turbine	Rolls Royce RR300 turbine
Horsepower	300 shp turboshaft; derated to 270 shp for takeoff and 224 shp continuous	300 shp turboshaft; derated to 270 shp for takeoff and 224 shp continuous
Maximum Gross Weight	2700 lb (1225 kg)	2700 lb (1225 kg)
Approximate Empty Weight (including oil & std avionics)	1280 lb (581 kg)	1345 lb (610 kg)
Fuel Capacity (73.6 gal)	493 lb (224 kg)	493 lb (224 kg)
Pilot, Passengers and Baggage (with maximum fuel)	927 lb (420 kg)	862 lb (391 kg)
Cruise Speed	up to 125 kts (144 mph)	up to 120 kts (138 mph) floats stowed
Maximum Range (no reserve)	approx 350 nm (400 sm)	approx 350 nm (400 sm)
Hover Ceiling IGE at Maximum Gross Weight	over 10,000 ft	over 10,000 ft
Hover Ceiling OGE at Maximum Gross Weight	over 10,000 ft	over 10,000 ft
Rate of Climb	over 1000 fpm	over 1000 fpm
Maximum Operating Altitude	14,000 ft	14,000 ft
Electrical System	28 volt	28 volt

DIMENSIONS



ROBINSON HELICOPTER COMPANY

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