



MINISTRY OF TRANSPORT OF THE RUSSIAN FEDERATION

FEDERAL AIR TRANSPORT AGENCY

TYPE CERTIFICATE

DATA SHEET

No FATA-02093R

R66 Helicopter and modifications

Issue 01
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R66 Model**Type Certificate Holder****Robinson Helicopter Company**

2901 Airport Drive, Torrance, California, 90505, USA

Manufacturer**Robinson Helicopter Company**

2901 Airport Drive, Torrance, California, 90505, USA

Aircraft Description

Single engine helicopter with main rotor and tail rotor and skids landing gear.

Category

Normal category rotorcraft

Purpose

Approved for day and night VFR flights, for over land and over water flights, for people transportation

Initial Certification Data

Type Certificate No CT337-R66. Issued by Interstate Aviation Committee Aviation Register on March 15, 2013.

Type Design

Defined in the document № RHC ENGINEERING REPORT F654-17-01 dated November 21, 2017.

Certification Basis

Certification Basis CB R66.27 approved by IAC AR on October 14, 2010, along with Supplement № 1, approved on March 14, 2011.

Certification Basis includes:

- Airworthiness requirements - Aviation Regulation, Part 27, Issue 2, 2014;
- Environmental protection requirements - Aviation Regulation, Part 36 (Issue 2) and Part 34, 2013;
- Special Technical Conditions.

Equivalent Safety Findings:

27.695 (c) (AT14992LA-R-S-1).

Noise on terrain

Helicopter complies with:

- Requirements of Subparts A, H, O of Aviation Regulation, Part 36 “Environmental protection requirements”, (AP-36);
- Requirements of ICAO Annex 16, Volume 1, Chapter 8 “Environment Protection”

Control Measuring Points	Measured noise levels, (EPNdB)	Normalized noise levels according to AP-36, (EPNdB)	Normalized noise levels according to ICAO Annex 16, Volume 1, Chapter 8, (EPNdB)
Take-off	87,8	90,9	87,9
Flyover	84,8	89,9	85,9
Approach	88,6	91,9	90,9

Noise data on terrain spreads for all the R66 Helicopters, which have no type design changes, which could have influence on noise data.

Approved Fuel Type

TC-1, PT (GOST-10227-86)
(foreign fuel types are defined in RFM)

Oil

For Engine	Refer to RFM
For transmission gearboxes	A257-22 (Mobil SHC 629)

Engine

One Rolls-Royce 250-C300/A1 Engine
IAC AR Engine Type Certificate No CT327-AMД dated on
August 10, 2011

Engine Limits

Takeoff (5 min)	
Power max (hp/ kW)	273/ 199
Gas generator speed, % (rpm)	105 (53519)
Gas temperature before turbine (°C)	782
Torque limits, %	100
Output shaft maximum speed, % (rpm)	101 (6076)

Maximum continuous	
Power max	1108 hp / 815 kW
Gas generator speed	38200 rpm
Gas temperature before turbine	735°C
Torque limits, %	83
Output shaft maximum speed, % (rpm)	99 (5956)

Rotor Speed Limits

Speed	Power on	Power off
Minimum	99%	88%
Maximum	101%	106%

Maximum power transmitted by the main gearbox

273 hp (199 kW)

Transmission Torque Limits

Rating	Torque	
	[Nm]	%
Take-off (5 min)	320	100
Max Continuous	265,7	83

Maximum Takeoff Weight

1225 kg

Maximum Baggage Loads in main baggage compartment

136 kg

Maximum Load on cargo compartment floor

244 kg/m²

Airspeed limits	Never exceed speed Vne is limited to indication speed of 259 km/h (140 knots) for maximum take-off weight less than 998 kg. Never exceed speed Vne is limited to indication speed of 241 km/h (130 knots) for maximum take-off weight of 998 kg and more. Never exceed speed Vne in autorotation mode is limited to indication speed of 185 km/h (100 knots).	
Center of Gravity Range	Refer to flight manual	
Minimum Crew	one pilot (helicopter control is carried out from the right armchair of cabin crew)	
Maximum seats number	5 (including pilot)	
Fuel Capacity	Maximum fuel	279 liters
	Non-usable fuel	3,8 liters
Maxim flight altitudes	4270 m (14000 feet) Note: Maximum flight altitude over land is limited to 2700 due to conditions of emergency landing because of fire	
Outside ambient temperature limits	-40 ⁰ C ... +50 ⁰ C (ISA +35 ⁰ C)	

Major changes approval

Major Change Approval	Type design change description	Appliance
№ CT337-R66/ОГП	Installation of Aspen EFD1000H PFD Display (FAA Project No. AT15477LA-R)	R66
	Installation of Garmin GTN 650 GPS/NAV/COM/GTN 750 Navigation Display GPS/NAV/COM (FAA Project No. AT15428LA-R)	R66
	Installation of Garmin GTR 225B radio station (FAA Project No. AT15428LA-R)	R66
	Installation of Garmin GMA 350H audio panel (FAA Project No. AT15428LA-R)	R66
	Installation of Garmin GTX 330ES transmitter (FAA Project No. AT15428LA-R)	R66
	Installation of Garmin GDL 88 transceiver (FAA Project No. AT15428LA-R)	R66
	Installation of modernized instrumental panel (FAA Project No. AT15428LA-R)	R66
	Modification of collective pitch (FAA Project No. AT15428LA-R)	R66
	Modification of cabin light dim (FAA Project No. AT15428LA-R)	R66
	Modification of low RPM oral warning (FAA Project No. AT15428LA-R)	R66

№ CT337-R66/ОГН-2	Installation of B237-8 battery (FAA Project No. AT15256LA-R)	R66
	Installation of five point safety harness C627 Rev. N5 (FAA Project No. AT15409LA-R)	R66
№ CT337-R66/ОГН-3	Installation of Garmin G500H system FAA Project No. AT16044LA-R)	R66
№ CT337-R66/ОГН-4	Installation of HeliSAS autopilot (FAA Project No. AT16044LA-R)	R66
№ CT337-R66/ОГН-5	Installation of emergency floats (FAA Project No. AT14874LA-R)	R66
	Installation of lower horizontal stabilizer (FAA Project No. AT16161LA-R)	
№FATA-02093R-MC-006	HeliSAS Autopilot with Aspen EFD1000H PFD; (FAA Project No. AT16208LA-R)	R66
№FATA-02093R-MC-007	Revised Limitations – Snow; (FAA Project No. TD14659LA-R)	R66
№FATA-02093R-MC-008	Auxiliary Fuel Tank Installation, (FAA Project No. AT16022LA-R)	R66

Additional Conditions, Limitations and Information for R66

1. Flights in icing conditions are prohibited.
2. Flights over water without installed floats at a distance from the coastline, exceeding the gliding distance in autorotation mode is prohibited.
3. A flight recorder should be installed, if the helicopter should be used for regular commercial transport.
4. Flights during thunderstorm activity are prohibited.
5. Flights over vast water areas are prohibited.

Other operational limitations are listed in the helicopter operational documentation.

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Original in Russian is signed by
Mikhail Bulanov
Deputy Director General