

目录 / Contents

第 1 部分总则（所有型别） /SECTION 1 General (ALL MODELS).....	3
第 2 部分/SECTION 2: ANSAT	4
I. 总则/General	4
II. 认可审定基础/Validation Certification Basis	4
III.技术特征和运行限制/Technical Characteristics and Operational Limitations.....	6
IV.经批准的中文标记标牌/ The Approved Chinese Placards.....	13

第 1 部分 总则（所有型别）

SECTION 1 General (ALL MODELS)

1. CAAC 认可数据单和型号合格证数据单

CAAC Validation Data Sheet and Type Certificate Data Sheet

	中国民用航空局认可数据单号、版次和颁发日期 CAAC Validation Data Sheet Number, Revision and issuance date	型号合格证数据单号、版次和颁发日期 Type Certificate Data Sheet Number, Revision and issuance date
当前 Current	VTC0365A, Revision 0, 2020-02-14	№CT236-Ансаг, Issue 12, March 2, 2018
历史 History	——	——

2. 认可当局/Validation Authority:

中国民用航空局/CAAC

审定当局/Certifying Authority:

联邦航空运输局/FATA

3. 型号合格证 Type Certificate Number:

No. CT236-Ансаг

型号合格证持有人/Type Certificate Holder:

PJSC “Kazan Helicopters”

14, Tetsevszkaya street, Kazan,

Republic of Tatarstan, Russian Federation, 420085

4. 型号合格证持有人记录/Type Certificate

N/A

Holder Record:

5. 进口要求/Import Requirement

为具备在中国运行的资格，按本型号认可证制造的每架航空器必须具有一份出口适航证，其上签注有出口国适航当局的审定声明，即：本架航空器符合 CAAC 所批准的型号设计，并处于可安全运行的状态。

To be considered eligible for operation in China, each aircraft manufactured under this Validation of Type Certificate must be accompanied by a certificate of airworthiness for export endorsed by Export Authority which states (in English language): This aircraft conforms to its CAAC type design and is in a condition for safe operation.

第 2 部分/SECTION 2: ANSAT

I. 总则/General

型别/Model ANSAT

适航类别/Airworthiness Category

运输类, A 类和 B 类旋翼航空器/Transport, category A and B

型号合格证持有人/ Type Certificate holder:

PJSC “Kazan Helicopters”

14, Tetsevskaia street, Kazan,

Republic of Tatarstan, Russian Federation, 420085

制造商/ Manufacturer:

PJSC “Kazan Helicopters”

14, Tetsevskaia street, Kazan,

Republic of Tatarstan, Russian Federation, 420085

IAC AR 批准日期/ IAC AR Approved Date:

2004 年 12 月 29 日/December 29, 2004

CAAC 型号认可证申请日期/CAAC Validation of Type Certificate Application Date:

2017 年 04 月 20 日/April 20, 2017

II. 认可审定基础/Validation Certification Basis

CAAC 的认可审定基础由 FATA 的审定基础和 CAAC 的附加技术条件组成。

The CAAC validation certification basis consists of the FATA certification basis and the CAAC additional technical conditions.

FATA 审定基础/FATA certification basis:

详见 FATA 型号合格证数据单 №CT236-Ансат (版本 12) 中的 ANSAT 型别的审定基础。

Refer to ANSAT certification basis in FATA Type Certificate Data Sheet

№ CT236-Ансат, issue 12.

CAAC 的附加技术条件/CAAC Additional Technical Requirement:

(1) 依据 CCAR21.29 (五) 有关适航规章、噪声规定所要求的手册、标牌、目录清单和仪表标记应当用中文或英文书写, 下类各项应当至少有中文表述:

(a) 机上所有对旅客进行的提示、警告和通知的文字标记和标牌。

(b) 机上所有向旅客或者机外营救人员指示应急出口和门的位置以及开启方法的文字标记和标牌。

(c) 旅客可能使用的机上所有应急设备的操作、使用说明。

(2) ANSAT 的燃油系统必须加以评估并证明使用 3 号燃油（遵守中国国家标准 GB 6537-2006）时具有满意的性能。在中国运行前，必须将证明有满意性能的数据提交 FATA 进行批准。

(3) 根据 CCAR 29.2 条，2003 年 8 月 1 日以后制造的每一架 ANSAT, KAZAN 直升机必须表明每个乘员座椅均装有满足本条(a)、(b)和(c)要求的安全带和肩带。

(a)每个乘员座椅必须具有一套单点脱扣的组合式安全带和肩带。每个驾驶员的组合式安全带和肩带必须允许驾驶员在系上安全带和肩带就座时能够完成飞行操作所有必需的功能。安全带和肩带不使用时必须有措施将其固定，以免妨碍旋翼航空器的操作和应急情况下的快速撤离。

(b)必须用安全带加上能防止头部与任何伤害性物体碰撞的肩带，保护每个乘员免受严重的头部损伤。

(c)在适用的情况下，安全带和肩带必须满足旋翼航空器型号审定基础规定的静强度和动强度要求。

(d)对本条而言，旋翼航空器的制造日期按下列日期确定：

(1)反映旋翼航空器完工并满足中国民用航空总局（以下简称民航总局）批准的型号设计资料的验收检查记录或等效记录的日期；或

(2)外国适航当局证明该旋翼航空器完工并颁发初始标准适航证或等效文件的日期。

(1) As per CCAR 21.29(5), the manuals, placards, listings and instrument markings required by the applicable airworthiness regulation, noise requirements, are presented in Chinese or English language. Below items must be at least in Chinese language.

(a)All literal markings and placards on an airplane used for indicating, warning and informing passengers

(b)All literal markings and placards on an airplane used for indicating passengers or outboard rescue personnel of the location of emergency exits and doors and their means of opening.

(c)The operation and use instructions of emergency equipment which passengers will use.

(2) The fuel system of ANSAT must be evaluated to demonstrate the satisfactory performance when using No.3 Jet Fuel (conforming to P.R.C National Standard GB 6537-2006). The data demonstrating satisfactory performance must be provide to the FATA for approval before its operation in China.

(3) As per CCAR29.2, for each ANSAT manufactured after August 1, 2003, KAZAN Helicopters must show that each occupant's seat is equipped with a safety belt and shoulder harness that meets the requirements of paragraphs (a), (b), and (c) of this section.

(a) Each occupant's seat must have a combined safety belt and shoulder harness

with a single-point release. Each pilot's combined safety belt and shoulder harness must allow each pilot, when seated with safety belt and shoulder harness fastened, to perform all functions necessary for flight operations. There must be a means to secure belts and harnesses, when not in use, to prevent interference with the operation of the rotorcraft and with rapid egress in an emergency.

(b) Each occupant must be protected from serious head injury by a safety belt plus a shoulder harness that will prevent the head from contacting any injurious object.

(c) The safety belt and shoulder harness must meet the static and dynamic strength requirements, if applicable, specified by the rotorcraft type certification basis.

(d) For purposes of this section, the date of manufacture is either—

(1) The date the inspection acceptance records, or equivalent, reflect that the rotorcraft is complete and meets the FATA-Approved Type Design Data; or

(2) The date that the foreign civil airworthiness authority certifies the rotorcraft is complete and issues an original standard airworthiness certificate, or equivalent, in that country.

III. 技术特征和运行限制 / Technical Characteristics and Operational

Limitations

飞行器描述/Description of the aircraft

单旋翼带尾桨直升机，两台涡轮轴发动机，滑撬起落架。

Single-rotor helicopter with tail rotor, two turboshaft engines, skid landing gear.

类别/Category

运输类，A类和B类旋翼航空器

Transport, category A and B

用途/Purpose

ANSAT 直升机被批准在正常天气条件目视飞行规则（VFR）下进行陆上航线飞行和非航线飞行，进行机舱内货物运输、乘客运输、伤员和医务人员运输。ANSAT helicopter is approved for flights under visual flight rules (VFR) in normal weather conditions on and off airways, over the land, for transportation of cargoes inside the fuselage, for passenger transportation, for transportation of injured persons and medical attendants.

初始审定信息/Information about initial certification

型号合格证编号：CT-236-AHcat

IAC AR 的发布日期：2004年12月29日

Type certificate No. CT-236-Ансат

Issued by IAC AR on 29.12.2004

型号设计/Type design

型号设计定义见文件 No. 338.0000.156 TK, 第 1 版

Description of type design is given in the document No. 338.0000.156 TK Issue 1.

可感知噪声特性/Perceivable noise characteristics

噪声水平 EPNdB AP-36/Noise levels EPNdB AP-36

直升机型号 Helicopter model	最大起飞重量 Max takeoff weight	发动机功率, 马力 Engine, power, h.p.	起飞 takeoff	飞越 flight	进场 approach
ANSAT	3600	PW207K, 630	92.5	90.5	95.5
90% 置信区间 90% confidence interval			±0.3	±0.3	±0.3
AP-36 规定的限制 AP-36 prescribed limit			95.6	94.6	96.6

发动机/Engine

2 台加拿大普惠公司涡轮轴 PW207K 发动机

IAC AR 的发动机型号合格证编号 CT217-AMД, 带有编号 CT217-AMД/Д-01 增补, 2003 年 10 月 14 日

2 turboshaft PW207K engines

IAC AR Type Certificate for engine No. CT217-AMД with Supplement No. CT217-AMД/Д-01 dated 14.10.2003

CAAC 型号认可证编号: VTC0104E, 认可数据单版次: 4

CAAC VTC No. VTC0104E, VTCDS No. VTC0104E Revision: 4

燃油/Fuel

PT (ГОСТ 10227 标准)

TC-1 (ГОСТ 10227 标准)

(国外等效的燃油在飞行手册中说明)

PT (ГОСТ 10227 standard)

TC-1 (ГОСТ 10227 standard)

(Foreign equivalent of fuels are specified in the Flight Manual)

批准用于发动机和减速器的滑油等级/Oil grades authorized for application in engine and transmission gearboxes

主、尾减速器滑油为 Б-3В
Б-3В oil in main and tail gearboxes

发动机限制/Engine Limitations

一台发动机不工作（2.5 分钟）/One engine inoperative (2.5 min):		
	输出马力（马力）/Output shaft horse power (h.p.)	710
	最大扭矩/Maximum torque (%)	112
	自由涡轮旋转频率（%）/Free turbine rotation frequency (%)	
	最大值/Maximum	104
	最小值/Minimum	95
	涡轮压气机转子转速频率允许最大值（%）/Maximum permissible frequency of turbine compressor rotor rotation (%)	103
	涡轮进口气体温度（℃）/Turbine inlet gas temperature (°C)	
	最大值/Maximum	970

一台发动机不工作（连续）/One engine inoperative (continuous):		
	输出马力（马力）/Output shaft horse power (h.p.)	648
	最大扭矩（%）/Maximum torque (%)	102
	自由涡轮旋转频率（%）/Free turbine rotation frequency (%)	
	最大值/Maximum	104
	最小值/Minimum	95
	涡轮压气机转子转速频率允许最大值（%）/Maximum permissible frequency of turbine compressor rotor rotation (%)	99.8
	涡轮进口气体温度（℃）/Turbine inlet gas temperature (°C)	
	最大值/Maximum	900

起飞功率（5 分钟）/Takeoff power (5 min):		
	输出马力（马力）/Output shaft horse power (h.p.)	630
	最大扭矩（%）/Maximum torque (%)	100
	自由涡轮旋转频率（%）/Free turbine rotation frequency (%)	
	最大值/Maximum	104
	最小值/Minimum	95
	涡轮压气机转子转速频率允许最大值（%）/Maximum permissible frequency of turbine compressor rotor rotation (%)	99.8
	涡轮进口气体温度（℃）/Turbine inlet gas temperature (°C)	
	最大值/Maximum	900

最大连续功率/Maximum continuous power:		
	输出马力 (马力) /Output shaft horse power (h.p.)	554
	最大扭矩 (%) /Maximum torque (%)	88
	自由涡轮旋转频率 (%) /Free turbine rotation frequency (%)	
	最大值/Maximum	104
	最小值/Minimum	95
	涡轮压气机转子转速频率允许最大值 (%) /Maximum permissible frequency of turbine compressor rotor rotation (%)	97.2
	涡轮进口气体温度 (°C) /Turbine inlet gas temperature (°C)	
	最大值/Maximum	840

瞬态/Transient:		
	最大扭矩 (%) /Maximum torque (%)	133
	自由涡轮旋转频率 (%) /Free turbine rotation frequency (%)	
	最大值/Maximum	直到 112.3/ up to 112.3
	涡轮压气机转子转速频率允许最大值 (%) /Maximum permissible frequency of turbine compressor rotor rotation (%)	104.1
	涡轮进口气体温度(°C)/Turbine inlet gas temperature (°C)	
	最大值/Maximum	1000

注释/Note:

100%输出轴 RPM 对应于 6000RPM 和自由涡轮 39807RPM。其他的发动机限制由编号 VTC0104E 的认可数据单版次 4 规定。

100% RPM of output shaft correspond to 6000 RPM and 39807 RPM of free turbine. Other engine limitations are specified in the VTCDS No. VTC0104E Revision 4.

主旋翼转速限制/Main rotor RPM limitations:

	无动力 Without power supply	有动力 With power supply	一台发动机失效 In case of failure of one of the engines
RPM (%)	95...104	100±1	100±2

以下是允许的/The following is allowed:

- 主旋翼超转直到 105%，最大 20 秒；
- 主旋翼超转直到 107%，最大 5 秒；
- 主旋翼转速下降直到 92%，最大 5 秒；
- 如果自转着陆，主旋翼转速下降直到 65%。
- MR overspeeding up to 105% for 20 seconds maximum;
- MR overspeeding up to 107% for 5 seconds maximum;

- Drop of MR RPM down to 92% for 5 seconds maximum;
- Drop of MR RPM down to 65% in case of autorotation landing.

主减速器最大功率/Maximum power from main gearbox:

1260 马力/1260 h.p.

最大起飞重量/Maximum takeoff weight:

3600 千克/3600 kg

直升机空机重量/Empty helicopter weight:

2365 千克/ 2365 kg

2468 千克 – 客运型/ 2468 kg – passenger version

2476 千克 – 医疗救援型/ 2476 kg – ambulance version

2629 千克– 客运 VIP 型/ 2629 kg – passenger VIP version

最大乘客数量/Maximum number of passengers:

7 人, 客运型/ 7 persons - passenger version

2 名医护人员和 1 名伤员, 医疗救援型/ 2 medical attendants and 1 injured person - ambulance version

5 人, 客运 VIP 型/ 5 persons - passenger VIP version

指示空速限制/IAS limitations:

- 双发工作不可超越指示空速 (IAS) $V_{NE}=275$ 千米/小时。/ Never exceed indicated airspeed (IAS) with all engines operating $V_{NE}=275$ km/h.
- 自转模式不可超越指示空速 (IAS) $V_{NE}=140$ 千米/小时。/ Never exceed indicated airspeed (IAS) in autorotation mode $V_{NE}=140$ km/h.
- 其他指示空速限制参见飞行手册。/For other IAS limitations refer to Flight manual.

重心范围/CG range:

纵向重心限制/Longitudinal CG limitations:

+100...-50mm (0 - 主旋翼旋转轴) / +100...-50mm (0 – axis of MR rotation).

侧向重心限制/Lateral CG limitations:

左-50mm, 右+50mm (从直升机对称平面起) /Left -50mm, right +50mm (from the helicopter symmetry plane)

注释: 如果安装了附加 (选装) 设备, 重量和重心应该重新计算。/Note: In case of installation of additional (optional) equipment the weight and CG location shall be recalculated.

最小机组构成/Minimum crew composition:

一名飞行员 (机长, 在右侧) / 1 pilot (captain, on the right side)

燃油容量/Fuel quantity:

左侧供给油箱 (升) / LH service tank (l)	79
右侧供给油箱 (升) / RH service tank (l)	79
前部油箱 (升) / Forward tank (l)	336
后部油箱 (升) / Aft tank (l)	196
总容量 (升) / Total capacity (l)	690
不可用燃油 (升) / Unusable fuel (l)	21

最大飞行高度/Maximum flight altitude:

5500 米/5500m

注释：飞行机组必须携带氧气的最大运行高度限制由直升机经营者所在国的联邦航空规则确定。

Note: Limitations of maximum operating flight altitude relating to the necessity of providing the flight crew with the oxygen are established by Federal Aviation Rules of country of operator of the aircraft.

外界大气温度限制/Outside air temperature limitations:

-45°C 到+30°C

from minus 45°C to plus 30°C

型号合格证的增补文件编号(ДСТ), 大改批准(ОГИ) No. of Supplement to Type Certificate (ДСТ), Major Change Approval (ОГИ)	大改描述 Description of major change	描述大改的文件 Document describing the major change
No.СТ236-Ансат/Д01 dated 24.02.2005	双驾驶员座舱 Two pilots cockpit	文件编号 334.200.000 BC《规格清单》 Document No. 334.200.000 BC «Specification sheet»
No.СТ236-Ансат/Д03 dated 22.08.2013	液压机械操纵系统的安装 Installation of hydromechanical control system	文件编号 338.0000.00 TK “安装液压机械操纵系统的 ANSAT 直升机, 型号设计” Document No. 338.0000.00 TK “ANSAT helicopter with hydromechanical control system. Type design”
No.СТ236-Ансат/ОГИ-04 dated 25.12.2014	客舱 Passenger cabin	文件编号 338.0000.00 TK “安装液压机械操纵系统的 ANSAT 直升机, 型号设计, 02 版” Document No. 338.0000.00 TK “ANSAT helicopter with hydromechanical control system. Type

		design. Issue 02”
No.СТ236-Ансат/ОГИ-05 dated 20.05.2015	救护直升机医疗设备的应用 Application of ambulance helicopter medical equipment	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 03 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 03”
No.СТ236-Ансат/ОГИ-06 dated 07.08.2015	增稳系统的应用 Application of stability augmentation system	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 04 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 04”
No.ФАВТ-ОГИ-01-АНСАТ dated 30.12.2015	客舱-VIP 型 Passenger cabin – VIP version	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 05 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 05”
No.ФАВТ-ОГИ-02-АНСАТ dated 30.12.2015	空调系统的应用 Application of air conditioning system	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 06 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 06”
No.ФАВТ-ОГИ-03-АНСАТ dated 24.06.2016	最大起飞重量 3600 公斤 Maximum takeoff weight 3600 kg	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 07 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 07”
No.ФАВТ-ОГИ-04-АНСАТ dated 23.08.2016	ANSAT 直升机持续适航 文件和飞行手册的修订 Revision of ANSAT helicopter Continued airworthiness instructions and Flight manual	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 08 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 08”
No.ФАВТ-ОГИ-05-АНСАТ dated 24.10.2016	将主最低设备清单 (MMEL) 纳入运行文件 Introduction of Master Minimum Equipment List (MMEL) into operating documentation set.	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 09 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 09”
No.ФАТА-02084R-МС-006 dated 24.05.2017	目视飞行规则下的夜间飞 行 Night flights under visual flight rules	文件编号 338.0000.00 TK “ANSAT 直升机, 型号设计, 10 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 10”

No.FATA-02084R-MC-007 dated 12.07.2017	运行温度范围扩展至 - 45°C Extension of operating temperatures range down to minus 45°C	文件编号 338.0000.00 TK “ANSAT 直升机，型号设计，11 版” Document No. 338.0000.00 TK “ANSAT helicopter. Type design. Issue 11”
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注释/Notes:

1. 其它限制由直升机运行文件规定。/ Other limitations are specified in the helicopter operating documentation.
2. ANSAT 直升机的运行应依据经批准的编号 338.0000.00 ПИМО 1 版的 ANSAT 直升机主最低设备清单 (MMEL)。/ ANSAT helicopter operation shall be effected according to the approved Master Minimum Equipment List (MMEL) of ANSAT helicopter No. 338.0000.00 ПИМО, Issue 1.

IV.经批准的中文标记标牌/ The Approved Chinese Placards

以下资料中所包含的中文标记标牌已由 CAAC 接受并由 FATA 批准:

The Chinese Placards involved in the following data have been accepted by CAAC and approved by FATA:

序号 Code	标题 Title	编号 Number	版本 Issue
1	ANSAT直升机型号定义/ ANSAT helicopter type design	338.0000.156 TK	1

-结束-

- THE END -