

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号合格证/设计批准书数据单
TYPE CERTIFICATE/DESIGN APPROVAL
DATA SHEET

编号/No: TC0017A

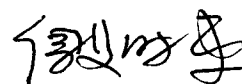
版次/Revision: 3

型别/Model: Z11 (AC301)

Z11MB1 (AC301A)

Z11M-100 (AC311)

批准人/Approved By: ,



日期/Date: 2012 年 5 月 8 日

May 8, 2012

本数据单型号合格证/型号设计批准书(编号: TC0017A)的组成部分,它规定了符合中国民用航空规章有关适航要求所颁发此型号合格证/设计批准书的产品的状态和限制。

This data sheet, which is part of Type Certificate/Type Design Approval (No. TC0017A), prescribes condition and limitation under which the product for which the Type Certificate/Type Design Approval was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

型号合格证或设计批准书持有人/Type Certificate or Type Design Approval Holder:

中国直升机设计研究所

CHINA HELICOPTER RESEARCH AND DEVELOPMENT
INSTITUTE (CHRDI)

中国江西省景德镇市 825 信箱

邮编: 333001

P.O.BOX 825, JING DEZHEN, JIANGXI PROVINCE, CHINA

POST CODE: 333001

版次/Revision	3	3	3	3	3	3	3	3	3	3	3
有效页/Effective Page	1	2	3	4	5	6	7	8	9	10	11
版次/Revision	3	3	3	3	3	3	3	3			
有效页/Effective Page	12	13	14	15	16	17	18	19			

一、产品型别和批准日期/THE PRODUCT MODEL AND APPROVAL DATE

型别(Model)	类别(Category)	批准日期(Approval Date)
Z11 (AC301)	正常类(Normal)	2001 年 4 月 12 日 (Apr 12, 2001)
Z11MB1 (AC301A)	正常类(Normal)	2003 年 12 月 23 日 (Dec 23, 2003)
Z11M-100 (AC311)	正常类(Normal)	2012 年 5 月 8 日 (May 8, 2012)

二、合格审定基础和生产依据/CERTIFICATION BASIS AND PRODUCTION BASIS

1. 型号合格审定基础: CERTIFICATION BASIS

I、Z11 (AC301) 型直升机, 2001 年 4 月 12 日批准

Z11 (AC301), Approved on Apr 12, 2001

Z11MB1 (AC301A) 型直升机, 2003 年 12 月 23 日批准

Z11MB1 (AC301A), Approved on Dec 23, 2003

(1) CCAR-27 (1988.4.21 生效), 以下例外:

27.361 采用了 FAR 27.361 (Amdt 27-23); 27.395 和 27.501 采用了 FAR 27.395 和 27.501 (Amdt 27-26)。

27.2(a)采用 CCAR-27-R1 (2002.8.1 生效)。

采用了修正案为 27-23 的 FAR 27.954 和 27.1027、修正案为 27-26 的 FAR 27.351 和 27.427,和修正案为 27-27 的 27.427。

CCAR-27 (Effective on Apr 21, 1988), except as follows:

27.361 adopts FAR 27.361 at Amdt 27-23, 27.395 and 27.501 adopt FAR 27.395 and 27.501 at Amdt 27-26.

27.2(a) adopts CCAR-27-R1 (Effective on Aug 1, 2002)

FAR 27.954 and 27.1027 at Amdt 27-23, FAR 27.351 and 27.427 at Amdt 27-26, and 27.427 at Amdt.27-27 are adopted.

(2) 噪声审定标准为 FAR-36 (Amdt 36-21)。

Certification standard for noise is FAR-36 (Amdt 36-21).

(3) 等效安全: §27.775、§27.1322(b)、§27.1505(c)。

Equivalent Level of Safety: §27.775, §27.1322(b), §27.1505(c).

II、Z11M-100 (AC311) 直升机, 2012 年 5 月 8 日批准

Z11M-100 (AC311), Approved on May 8, 2012

(1) CCAR-27 (1988.4.21 生效), 以下除外:

CCAR-27-R1 (2002.8.1 生效) 修订的以下条款: CCAR27.2(a), 27.65(b), 27.175, 27.307(a), 27.351, 27.361, 27.427, 27.501, 27.602, 27.610(d), 27.613(b)(e), 27.629, 27.663(a), 27.775, 27.783(b), 27.805, 27.807(a)(b), 27.853(a)(c), 27.861, 27.901, 27.903(a)(c), 27.955(a), 27.1027, 27.1091(d), 27.1141(c), 27.1143, 27.1163(b), 27.1187, 27.1193(f), 27.1303, 27.1305, 27.1337(e)。

CCAR-27 (Effective on Apr 21, 1988), except as follows:

CCAR27.2(a), 27.65(b), 27.175, 27.307(a), 27.351, 27.361, 27.427, 27.501, 27.602, 27.610(d), 27.613(b)(e), 27.629, 27.663(a), 27.775, 27.783(b), 27.805, 27.807(a)(b), 27.853(a)(c), 27.861, 27.901, 27.903(a)(c), 27.955(a), 27.1027, 27.1091(d), 27.1141(c), 27.1143, 27.1163(b), 27.1187, 27.1193(f), 27.1303, 27.1305, 27.1337(e) as amended by CCAR-27-R1 (Effective on Aug.1, 2002):

(2) 噪声审定标准为 CCAR-36-R1 (2007.4.15 生效)。

Certification standard for noise is CCAR-36-R1 (Effective on Apr.15, 2007).

(3) 专用条件: 高能电磁辐射 (HIRF)。

Specified condition: High-intensity Radiated Fields (HIRF).

(4) 等效安全: CCAR-27.1545、27.1549。

Equivalent level of safety: CCAR-27.1545, 27.1549.

2. 生产依据 PRODUCTION BASIS

(1) Z11 (AC301)、Z11MB1 (AC301A) 型直升机的生产许可证编号: PC019A。

Z11 (AC301)、Z11MB1 (AC301A) Production Certificate: PC019A.

(2) Z11M-100 (AC311) 型机, 仅依据型号合格证生产。

Z11M-100 (AC311) will be produced only under type certificate.

三、技术特征和使用限制/TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

I、 Z11 (AC301) 型直升机, 2001 年 4 月 12 日批准

Z11 (AC301), Approved on Apr 12, 2001

(1) 发动机 1 台 WZ-8D 型涡轮轴发动机

Engine One WZ-8D turbine engine

-燃油 3 号喷气燃料 (GB6537-94)

Fuel No.3 jet fuel (GB6537-94)

-发动机滑油 MOBIL JET OIL II (MIL-L-23699)

Engine Oil MOBIL JET OIL II (MIL-L-23699)

(2) 发动机工作限制 Engine operation limits

-燃气发生器转速 Ng: Gas generator speed:

最大起飞 (5 分钟) Maximum takeoff (5 minutes) 100.8%

最大连续 Maximum continuous 98%

最大瞬时 (小于 20 秒钟) 105.5%

Maximum transient (less than 20 seconds)

-排气温度 T₄: Exhaust gas temperature (EGT)

发动机起动时最大值 795°C

Maximum during engine starting

发动机起动时最大瞬时值 (小于 10s) 865°C

Maximum transient during engine starting (Less than 10s)

起飞时的最大值 845°C

Maximum during Takeoff

最大连续状态时 795°C

Maximum continuous

-关于包括燃油添加剂、转速和温度的其它限制见飞行手册。

For the other limitations of fuel additive, rotation speed and temperature, refer to flight manual.

(3) 主减速器功率限制 MGB power limit

限制功率: 440 千瓦 Limited power: 440kw.

(4) 旋翼限制 Rotor limits

最小(有动力)	375 转/分钟	Minimum (power on)	375 RPM
最大(有动力)	394 转/分钟	Maximum (power on)	394 RPM
最小(无动力)	320 转/分钟	Minimum (power off)	320 RPM
最大(无动力)	430 转/分钟	Maximum (power off)	430 RPM
低转速音响警告	360 转/分钟	Low speed aural warning	360 RPM
高转速音响警告	400 转/分钟	High speed aural warning	400 RPM

(5) 空速限制 (校正空速) Airspeed limits(calibrated airspeed)

-最大 V_{NE} (有动力)=267.9 千米/小时, 在零压力高度

Maximum V_{NE} (power on) = 267.9km/h, at zero pressure altitude

-最大 V_{NE} (无动力)=216.4 千米/小时, 在零压力高度

Maximum V_{NE} (power off) = 216.4km/h, at zero pressure altitude

-在较高高度时, 高度每升高 1000 米,速度减小 18 千米/小时。

At higher altitude, V_{NE} decreases 18km/h for each 1000m increment of altitude.

-寒冷气候时, 外界气温低于-30℃时, 有动力 V_{NE} 减小 19 千米/小时。

At the cold weather, V_{NE} (Power on) decreases 19km/h while the OAT is less than -30℃.

-其它速度限制见飞行手册 (编号: Z11-RFM-1) 的第 2 章。

For the other airspeed limitations, refer to the Chapter 2 of the Flight Manual (Z11-RFM-1).

(6) 重心限制 C.G. limits

-纵向重心限制 Longitudinal C.G. limit

重心前限: 3.17 米(适用于 1265 千克至 2000 千克), 3.20 米(2200 千克), 2000 千克至 2200 千克之间线性变化。

Forward limit: 3.17m (applicable for 1265kg to 2000kg), 3.20m (2200kg), linear variation between 2000kg and 2200kg.

重心后限: 在 2200 千克时, 3.43 米; 在 1265 千克时, 3.496 米; 2200 千克至 1265 千克之间线性变化。

Afterward limit: 3.43m (2200kg); 3.496m (1265kg); linear variation

	between 2200kg and 1265kg.		
-横向重心限制	Lateral C.G. limit		
重心左限:	0.18 米	Left limit:	0.18m
重心右限:	0.14 米	Right limit:	0.14m
(7) 空机重心范围	无		
Empty weight C.G. range	None		
(8) 测量基准	纵向基准位于桨毂中心前 3.4 米 横向基准为直升机机身纵向对称面		
Measurement datum	Longitudinal: 3.4m in forward of main rotor hub center Lateral: vertical plane passing longitudinally through helicopter fuselage		
(9) 水平措施	按水平测量图 (Z11-0012-0) 进行纵向和横向测量		
Leveling means	Level longitudinally and laterally according to the leveling measurement drawing (Z11-0012-0)		
(10) 最大重量	2200 千克		
Maximum weight	2200kg		
(11) 最少机组成员	1 名飞行员		
Minimum crew	One pilot		
(12) 最大乘员数	6 名 (含飞行员)		
Maximum passengers	6 (including the pilot)		
(13) 最大行李重量	Maximum baggage weight		
左行李舱:	120 千克	Left baggage compartment:	120kg
右行李舱:	100 千克	Right baggage compartment:	100kg
后行李舱:	80 千克	Rear baggage compartment:	80kg
(14) 燃油容量	Fuel capacity		
最大燃油容量:	535 升	Maximum fuel capacity:	535 liter
不可用燃油容量:	3 升	Unusable fuel capacity:	3 liter
(15) 滑油容量	Oil capacity		
主减系统滑油容量:	6.5 升 (MOBIL JET OIL II)		

- MGB oil capacity: 6.5 liter (MOBIL JET OIL II)
尾减系统滑油容量: 0.33 升 (MOBIL JET OIL II)
TGB oil capacity: 0.33 liter (MOBIL JET OIL II)
发动机系统滑油容量: 6.2 升
Engine oil capacity: 6.2 liter
- (16) 最大使用高度 5000 米 (压力高度)
Maximum operating altitude 5000m (pressure altitude)
- (17) 操纵面运动范围 Operation movement range
总距 Collective pitch: -0.34° — 13.74°
纵向 Longitudinal: -10.92° — 14.53°
横向 Lateral: -5.70° — 7.50°
航向 Directional: -6.60° — 21.10°
(注: 垂向以向上为正方向, 纵向以向前为正方向, 横、航向以向右为正方向)
(Note: Up is the positive direction on the vertical directions; right is the positive direction on the lateral directions; forward is the positive direction on the longitudinal directions.)
- (18) 制造人序列号 Z11-0003 及其之后的序列号
Manufacturer serial number Z11-0003 and its subsequent serial number
- (19) 设备 适用的适航规章 (见审定基础) 中规定的基本设备必须安装在直升机上
Equipments The basic required equipments as prescribed in the applicable airworthiness regulations (refer to Certification Basis) must be installed in the helicopter.

II、Z11MB1 (AC301A) 型直升机, 2003 年 12 月 23 日批准

Z11MB1 (AC301A), Approved on Dec.23, 2003

(1) 发动机 Engine

-型别: ARRIEL 2B1A

Type: ARRIEL 2B1A

-装机数量: 1 台

Numbers: One engine

-制造人: 法国透博梅卡公司

Manufacturer: TURBOMECA Inc.

(2) 燃油 Fuel

-国内牌号 China Fuel Type

燃油牌号或规格: 3 号喷气燃料 (GB6537-94)

Fuel spec: No.3 jet fuel (GB6537-94)

-国外牌号 Foreign Fuel Type

技术条件符合最新更改单最新标准

Technical condition complies with updated change order

and updated standard

燃油型号 Fuel Type	北大西洋 公约组织 符号 NATO	技术条件提供更改单或现行标记 Technical condition provide change order or current sign			防冰添加剂 Water proof additive
		法国 France	美国 U.S.A	英国 U.K	
50 航空煤油 Aviation kerosene (AVTUR-FS11) JP8	F34	AIR3405 F34	MIL-T-83 133 JP8	D.Eng.RD 2453	有 yes
50 航空煤油 Aviation kerosene (AVTUR) JP1	F35	AIR3405 F35	ASTM-D-1655 Jet A1	D.Eng.RD 2494	无 none
航空煤油 Aviation kerosene	—	—	ASTM-D-1655 Jet A	—	无 none
高闪点油 JP5 High-flash oil (AVCATFS11)	F44	AIR3404 F44	MIL-T-5624 JP5	D.Eng.RD 2452	有 yes
航空煤油 Aviation kerosene TS1, RT	—	—	GOST 10227	—	无 none

(3) 发动机滑油 Engine oil

滑油类型 Oil type	北约编号 NATO	技术规格 Specification		推荐的滑油牌号 Recommended grade
		法国 France	美国 U.S.A	
合成油在 98.9℃时, 运动粘度为 $5 \times 10^{-6} \text{m}^2/\text{s}$ When resultant oil temperature is at 98.9℃, motion viscosity is $5 \times 10^{-6} \text{m}^2/\text{s}$	0-156		MIL-PRF-23699	·Aero Shell Turbine Oil 560 ·EXXON Turbo Oil 2197 ·BP TURBO OIL 2197 ·MOBIL Jet Oil 254 ·MOBIL Jet Oil 291 ·MOBIL Jet Oil II
合成油在 98.9℃时, 运动粘度为 $3 \sim 5$ $\times 10^{-6} \text{m}^2/\text{s}$ When resultant oil temperature is at 98.9℃, motion viscosity is $3 \sim 5$ $\times 10^{-6} \text{m}^2/\text{s}$	0-148		MIL-PRF-7808	·CASTROL 325 ·EXXON TURBO OIL 2389 ·BP TURBO OIL 2389
	0-150	AIR 3514		·TURBO NYCOIL 13B

(4) 发动机工作限制 Engine operation limits

-燃气发生器转速 Ng: Gas generator speed:

最大起飞 (5 分钟) Maximum takeoff (5 minutes) 100.94%

最大连续 Maximum continuous 96.94%

最大瞬时 (小于 20 秒钟) 102.3%

Maximum transient (less than 20 seconds)

-排气温度 T4: Exhaust gas temperature(EGT)

发动机起动时最大值 750℃

Maximum during engine starting

发动机起动时最大瞬时值 (小于 10s) 865℃

Maximum transient during engine starting

起飞时的最大值	915℃
Maximum during Takeoff	
最大连续状态时	849℃
Maximum continuous	
起动后最大瞬时状态（小于 20 秒钟）	941℃
Maximum transient after starting (less than 20 seconds)	

-关于包括燃油添加剂、转速和温度的其它限制见飞行手册。

For the other limitations of fuel additive, rotation speed and temperature, refer to flight manual.

(5) 主减速器功率限制 MGB power limits

限制功率：440 千瓦 Limited power: 440kw.

(6) 旋翼限制 Rotor limits

有动力(自动)Power on (automatic)	386±1 转/分钟(RPM)
	393±1 转/分钟(RPM)
有动力(手动)Power on (manual)	386 ⁺⁸ ₋₁₁ 转/分钟(RPM)
最小(无动力)Minimum (power off)	320 转/分钟(RPM)
最大(无动力)Maximum (power off)	430 转/分钟(RPM)
低转速音响警告 Low speed aural warning	360 转/分钟(RPM)
高转速音响警告 High speed aural warning	400 转/分钟(RPM)

(7) 空速限制（校正空速）Airspeed limits(calibrated airspeed)

-有动力飞行时 V_{NE} V_{NE} (power on)

零压力高度时， V_{NE} 值为 267.9km/h;

V_{NE} is 267.9km/h, at zero pressure altitude;

高度每增高 1000m， V_{NE} 速度减小 18km/h;

The V_{NE} decreases 18km/h for each altitude increment 1000m.

外界气温低于-30℃时， V_{NE} 减小 19km/h。

V_{NE} decreases 19km/h while the ambient temperature is less than -30℃.

-无动力飞行时 V_{NE} V_{NE} (power off)

零压力高度时， V_{NE} 值为 216.4km/h;

V_{NE} is 216.4km/h, at zero pressure altitude;

高度每增高 1000m, V_{NE} 减小 18km/h;

The V_{NE} decreases 18km/h for each altitude increment 1000m.

外界气温低于-20℃时, V_{NE} 减小 37km/h, 不得低于 120km/h。

V_{NE} decreases 37km/h (must not be less than 120km/h) while the ambient temperature is less than -20℃.

-其它速度限制见飞行手册（编号：Z11MB1-RFM-1）的第 2 章。

For the other Airspeed limitations, refer to the Chapter 2 of the Flight Manual (Z11MB1-RFM-1).

(8) 重心限制 C.G. limits

-纵向重心限制 Longitudinal C.G. limit

重心前限：3.17 米（适用于 1295 千克至 2000 千克），3.20 米（2200 千克），2000 千克至 2200 千克之间线性变化。

Forward limit: 3.17m (applicable for 1295kg to 2000kg), 3.20m (2200kg), linear variation between 2000kg and 2200kg.

重心后限：在 2200 千克时，3.43 米；在 1295 千克时，3.493 米；2200 千克至 1295 千克之间线性变化。

Afterward limit: 3.43m (2200kg); 3.496m (1295kg); linear variation between 2200kg and 1295kg.

-横向重心限制 Lateral C.G. limit

重心左限：0.18 米 Left limit: 0.18m

重心右限：0.14 米 Right limit: 0.14m

(9) 空机重心范围 无 Empty weight C.G. range None

(10) 基准 纵向基准位于桨毂中心前 3.4 米

横向基准为直升机机身纵向对称面

Datum Longitudinal: 3.4m in forward of main rotor hub center

Lateral: vertical plane passing longitudinally through helicopter fuselage

(11) 水平措施 按水平测量图（Z11-0012-0）进行纵向和横向测水平。

Leveling means Level longitudinally and laterally according to the leveling

measurement drawing (Z11-0012-0)

(12) 最大重量 2200 千克

Maximum weight 2200kg

(13) 最少机组成员 1 名飞行员

Minimum crew One pilot

(14) 最大乘员数 6 名 (含飞行员)

Maximum passengers 6 passengers (including the pilots)

(15) 最大行李重量 Maximum baggage weight

左行李舱: 120 千克 Left baggage compartment: 120kg

右行李舱: 100 千克 Right baggage compartment: 100kg

后行李舱: 80 千克 Rear baggage compartment: 80kg

(16) 燃油容量 Fuel capacity

最大燃油容量: 535 升 Maximum fuel capacity: 535 liter

不可用燃油容量: 3 升 Unusable fuel capacity: 3 liter

(17) 滑油容量 Oil capacity

主减系统滑油容量: 6.5 升(MOBIL JET OIL II)

MGB oil capacity: 6.5 liter (MOBIL JET OIL II)

尾减系统滑油容量: 0.33 升(MOBIL JET OIL II)

TGB oil capacity: 0.33 liter (MOBIL JET OIL II)

发动机系统滑油容量: 6.2 升

Engine oil capacity: 6.2 liter

(18) 最大使用高度 5500 米 (压力高度)

Maximum operating altitude 5500m (pressure altitude)

(19) 操纵面运动范围 Operation movement range

总距 Collective pitch: -0.34° — 13.74° 纵向 Longitudinal: -10.92° — 14.53° 横向 Lateral: -5.70° — 7.50° 航向 Directional: -6.60° — 21.10°

(注: 垂向以向上为正方向, 纵向以向前为正方向, 横、航向以向右为正方向)

向)

(Note: Up is the positive direction on the vertical directions; right is the positive direction on the lateral directions; forward is the positive direction on the longitudinal directions.)

(20) 制造人序列号 Z11MB1-00 及其之后的序列号

Manufacturer serial number Z11MB1-00 and its subsequent serial number

(21) 设备 适用的适航规章（见审定基础）中规定的基本设备必须安装在直升机上

Equipments The basic required equipments as prescribed in the applicable airworthiness regulations (refer to Certification Basis) must be installed in the helicopter.

III、Z11M-100 (AC311) 型直升机, 2012 年 5 月 8 日批准

Z11M-100 (AC311), Approved on May 8, 2012

(1) 发动机 Engine

型别: LTS101-700D-2

Type: LTS101-700D-2

装机数量: 一台

Numbers: One engine

制造人: Honeywell International Inc.

Manufacturer: Honeywell International Inc.

(2) 发动机限制 Engine limits

	燃气发生器转速(NG) Gas generator speed	排气温度(T4) Exhaust gas temperature
最大瞬时 Maximum transient (30s)	107.2%	944℃
最大起飞 Maximum takeoff (5min)	106.6%	923℃
最大连续 Maximum continuous	104.8%	890℃

(3) 旋翼转速 Rotor speed

-有动力时 With power on

地面低桨距时 380±5 转/分钟 Low pitch on ground 380±5r/min

稳定飞行时	386 ⁺⁸ ₋₁₁ 转/分钟	Steady flight	386 ⁺⁸ ₋₁₁ r/min
-无动力时 With power off			
最大转速	430 转/分钟	Maximum speed	430r/min
最小转速	320 转/分钟	Minimum speed	320r/min
(4) 主减速器功率限制	440 千瓦	MGB power limit	440kw.

(5) 燃油和燃油容量 Fuel and fuel capacity

燃油名称:	3 号喷气燃料	Name:	No.3 jet fuel
燃油牌号 (规范):	RP-3 (GB6537-94)	Fuel type(spec):	RP-3 (GB6537-94)
最大燃油容量:	535 升	Maximum fuel capacity:	535L
不可用燃油容量:	3 升	Unusable fuel capacity:	3L

(6) 滑油和滑油容量 Oil and oil capacity

-滑油 Oil:

发动机滑油牌号: “MOBIL JET OIL 254” 或 “BP TURBO OIL 2197”

Engine oil type: “MOBIL JET OIL 254” or “BP TURBO OIL 2197”

传动系统滑油牌号: 飞马 II 号

Oil type for transmission system: Mobil Jet Oil II

尾减系统滑油牌号: 飞马 II 号

Oil spec for TGB: Mobil Jet Oil II

-滑油容量 Oil capacity:

主减系统滑油容量: 6.5 升 MGB oil capacity: 6.5L

尾减系统滑油容量: 0.33 升 TGB oil capacity: 0.33 L

发动机滑油容量: 6.2 升 Engine oil capacity: 6.2 L

(7) 空速限制 Airspeed limits

-有动力飞行时 V_{NE} (校正空速): 零密度高度时, V_{NE} 值为 145.7kts (270 千米/小时);

V_{NE} (calibrated airspeed)with power on : V_{NE} is 145.7kts (270km/h), at zero density altitude;

-无动力飞行时 V_{NE} (校正空速): 零密度高度时, V_{NE} 值为 118.3kts (219 千米/小时);

V_{NE} (calibrated airspeed)with power off : V_{NE} is 118.3kts (219km/h), at zero density altitude;

-其它条件下的 V_{NE} 见飞行手册（编号：JZ-Z11M-100-D02）的第 2 章。

For the V_{NE} under other conditions, refer to the Chapter 2 of the Flight Manual (JZ-Z11M-100-D02).

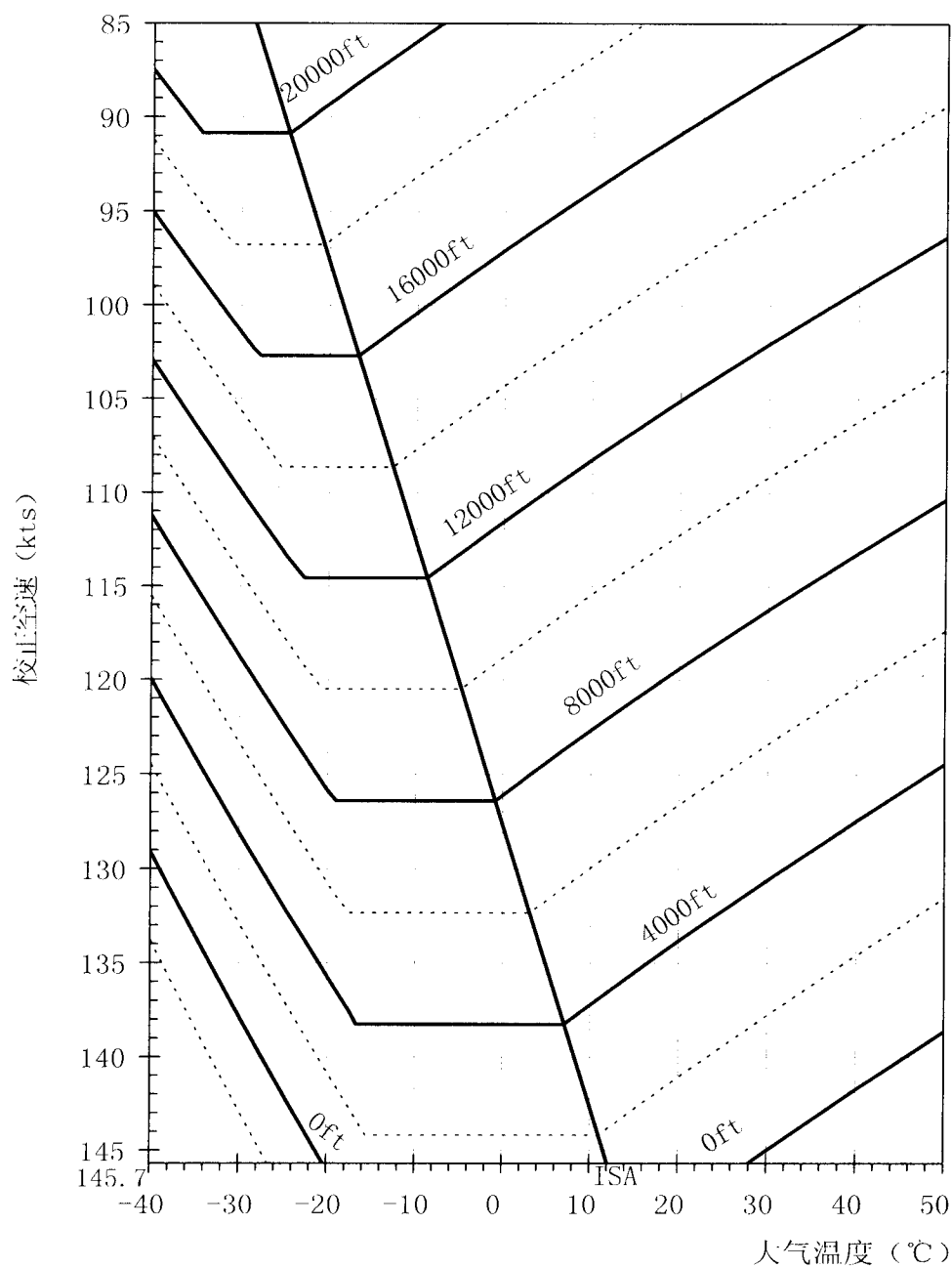


图 1 有动力飞行 V_{NE}
Chart 1 V_{NE} with power on

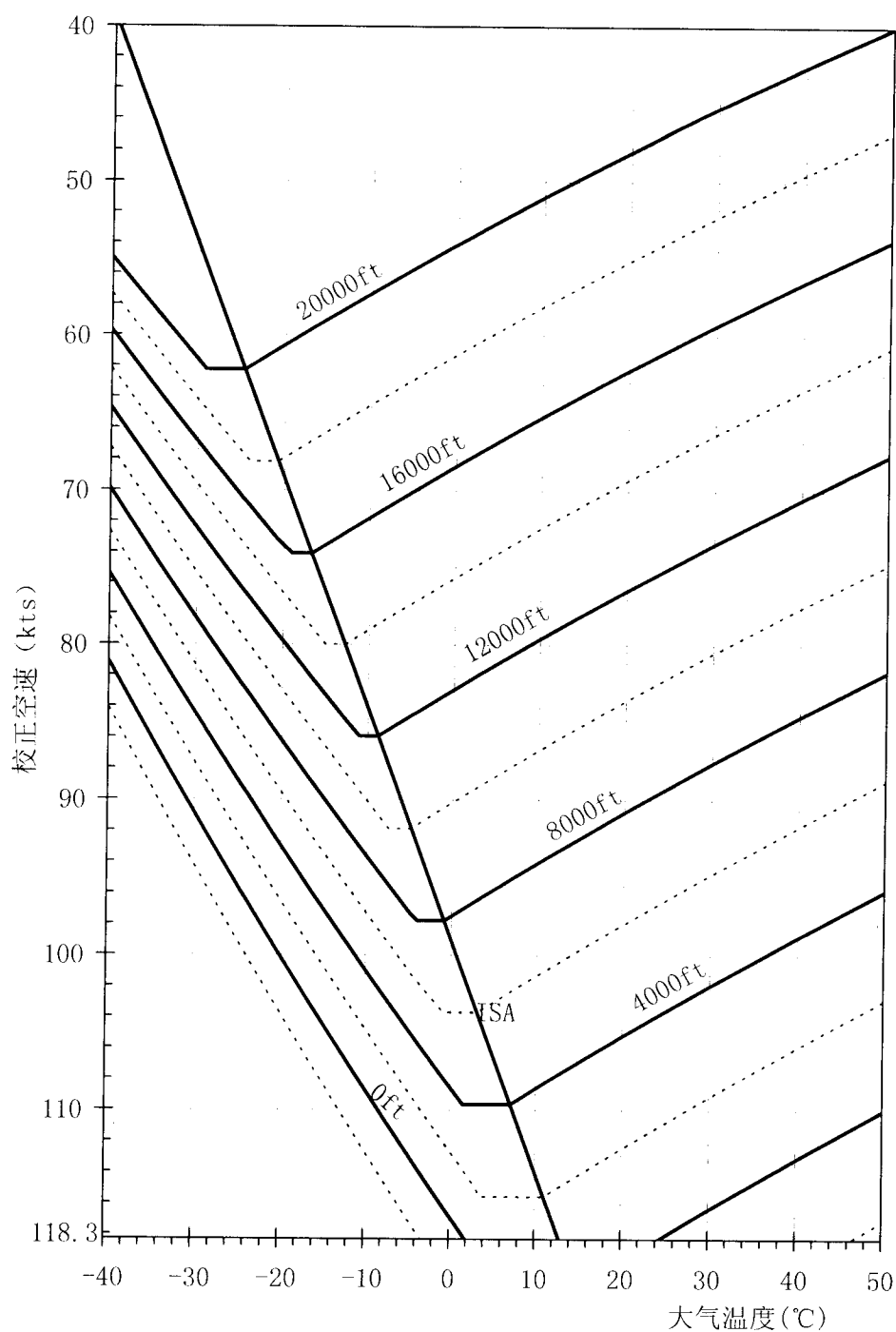


图 2 无动力飞行 V_{NE}
Chart 2 V_{NE} with power off

(8) 最大使用高度 19685 英尺 /6000 米 (压力高度)

Maximum operating altitude 19685ft /6000m (pressure altitude)

(9) 重心范围 C.G range

-纵向重心限制 Longitudinal C.G limit

重心前限: 3.170 米 Forward limit: 3.170m

重心后限: 3.349 米 Afterward limit: 3.349m

-横向重心限制 Lateral C.G limit

重心左限: 0.18 米 Left limit: 0.18 m

重心右限: 0.14 米 Right limit: 0.14 m

(10) 空机重心范围 无 Empty weight C.G range none

(11) 最大重量 2200 千克 Maximum weight 2200kg

(12) 测量基准 Measurement datum

-纵向基准位于桨毂中心前 3.40 米

Longitudinal: 3.4m in forward of main rotor hub center

-横向基准为直升机机身纵向对称面

Lateral: vertical plane passing longitudinally through helicopter fuselage

(13) 水平测量措施 Leveling means

按照《直 11M-100 型机水平测量与检查技术条件》(TN B082G5001C01) 进行纵向和横向测水平。

Level longitudinally and laterally according to the leveling measurement and inspection technical condition of Z11M-100 (TN B082G5001C01)

(14) 最小飞行机组 一名驾驶员, 在右侧座位。

Minimum crew One pilot, on the right seat

(15) 座位数量 6 座(含正副驾驶座椅)。

Seats number Six (including the seats for pilot and co-pilot)

(16) 操纵面运动范围 Operation movement range

总距 Collective pitch: -0.34° (degree) $\sim +13.74^{\circ}$ (degree)

纵向 Longitudinal: -10.92° (degree) $\sim +14.53^{\circ}$ (degree)

横向 Lateral: -5.70° (degree) $\sim +7.50^{\circ}$ (degree)

航向 Directional: -6.60° (degree) $\sim +21.10^{\circ}$ (degree)

(注: 垂向以向上为正方向, 纵向以向前为正方向, 横、航向以向右为正方向)

(Note: Up is the positive direction on the vertical directions; right is the positive direction on the lateral directions; forward is the positive direction on the longitudinal directions.)

(17) 制造人序列号 Z11M-100-001 及其之后的序列号。

Manufacture serial number Z11M-100-001 and its subsequent serial number.

(18) 设备 Equipments

适用的适航规章(见审定基础)所要求的基本设备必须安装在航空器上以满足型号合格审定的要求。

The basic required equipments as prescribed in the applicable airworthiness regulations (refer to Certification Basis) must be installed in the aircraft to meet the requirements of type certification.

四、批准的技术资料/APPROVED TECHNICAL DOCUMENTS

- I、飞行手册 《直 11 型直升机飞行手册》(Z11-RFM-1)
 《直 11MB1 型直升机飞行手册》(Z11MB1-RFM-1)
 《Z11M-100 型机飞行手册》(JZ-Z11M-100-D02)

- Flight Manual Z11 Flight Manual (Z11-RFM-1)
 Z11MB1 Flight Manual (Z11MB1-RFM-1)
 Z11M-100 Flight Manual (JZ-Z11M-100-D02)

II、适航性限制文件

- 《直 11 型机适航性限制》(Z11-RMMP-AL-1)
 《直 11MB1 型机适航性限制》(Z11MB1-RMMP-AL-1)
 《Z11M-100 型机维护手册-适航性限制》(相应的维护手册编号:
 JZ-Z11M-100-D04)

Airworthiness Limitation Documents

- Z11 Airworthiness Limitations (Z11-RMMP-AL-1)
 Z11MB1 Airworthiness Limitations (Z11MB1-RMMP-AL-1)
 Z11M-100 Maintenance Manual-airworthiness limitation
 (corresponding maintenance manual number: JZ-Z11M-100-D04)

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

注释 1 Z11 型民用直升机的制造必须符合《直 11 民用直升机图样目录》（Z11M-HZ-1）和《直 11 型机机载设备和零部件合格审定清单》（Z11-HZ-HM16）；Z11MB1 型直升机的制造必须符合《直 11MB1 型直升机图样目录》（Z11MB1-HZ-7）和《直 11MB1 型机机载设备和零部件合格审定清单》（Z11MB1-HZ-5）；Z11M-100 型机（AC311）的生产制造必须符合《直 11M-100 型机图样目录》（DVLB007G7005C01）和《直 11M-100 型机机载设备和零部件合格审定清单》（DVLB001G7001C01）。

Note 1 The manufacture of Z11 civil helicopter must conform to “Z11 Civil Helicopter Drawing list” (Z11M-HZ-1) and “Z11 airborne equipment and part certification list” (Z11-HZ-HM16); the manufacture of Z11MB1 must conform to “Z11MB1 Helicopter Drawing List” (Z11MB1-HZ-7) and “Z11MB1 airborne equipment and part certification list” (Z11MB1-HZ-5); the manufacture of Z11M-100 (AC311) must conform to “Z11M-100 Helicopter Drawing List” (DVLB007G7005C01) and “Z11M-100 airborne equipment and part certification list” (DVLB001G7001C01).

注释 2 Z11M-100（AC311）的持续适航文件在首架直升机交付或颁发标准适航证之前（以先到为准）必须是完备的。

Note 2 The Instruction of Continuous Airworthiness (ICA) of Z11M-100 (AC311) must be completed before the delivery of first helicopter or the issuing of standard airworthiness certificate (refer to which is coming first).

- 结束 -

- THE END -