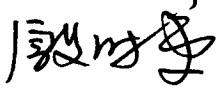
编号/No：VTC0212A
版次/Revision：1
型别/Model：
ERJ 190-100 STD
ERJ 190-100 LR
ERJ 190-100 IGW
ERJ 190-200 STD
ERJ 190-200 LR
ERJ190-200 IGW
批准人/Approved By:



日期/Date：2009 年 12 月 24 日

型号认可证数据单

THE VALIDATION DATA SHEET

本数据单是型号认可证（编号：VTC0212A)的组成部分，它规定了符合中国民用航空总局的适航要求所颁发此型号认可证的产品的状态和限制。

This data sheet，which is part of Validation of Type Certificate (No: VTC0212A), prescribes condition and limitation under which the product for which the type certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

型号认可证持有人/Validation of Type Certificate Holder：
EMBRAER - EMPRESA BRASILEIRA DE AERONÁUTICA S/A
Av. Brig. Faria Lima, 2170
12227-901 São José dos Campos – SP
BRAZIL

有效页清单/List of effective pages :

页数/ Pages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
版次/Revision	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
页数/ Pages	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
版次/Revision	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

第 1 部分 概述（所有机型）
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

	中国民用航空总局认可数据单号、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	VTC0212A，版次 1，2009 年 12 月 24 日	ANAC TCDS EA-2005T13, Revision 08, issued in MAR. 2009
历史/History	VTC0212A，版次 0，2008 年 5 月 12 日	ANAC TCDS EA-2005T13, Revision 05, issued in JAN. 2008

2.类别/Airworthiness Category: 运输类飞机/Transport Airplanes

3.认可当局/Validation Authority:
审定当局/Certifying Authority: 中国民用航空局CAAC
ANAC - AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

4.型号合格证持有人/Type Certificate Holder: EMBRAER - EMPRESA BRASILEIRA DE AERONÁUTICA S/A
Av. Brig.Faria Lima, 2170
12227-901 São José dos Campos – SP
Brazil

5.CAAC 特殊要求/CAAC Special Requirements:

交付到中国的每一架 ERJ 190-100/-200 系列飞机必须满足下述特殊要求：
Each of Series ERJ 190-100/-200 Airplanes delivered to China shall meet the following special requirements:

（1）中国民用航空燃油主要使用 3 号喷气燃油（GB6537-94）。在中国运行前，飞机使用该燃油需经批准。
The Chinese fuel mainly used for civil aviation is No. 3 Jet fuel (GB6537-94). The fuel needs to be approved for the airplanes before its operation in China.

（2）根据 CCAR21.29（五）规定，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应当至少有中文表述；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应当至少有中文表述；旅客可能使用的机上所有应急设备的操作、使用说明应当至少有中文表述。
As per CCAR 21.29(e), all literal marking and placards on an airplane used for advising, warning, or notifying passengers must be at least in Chinese; all literal markings and placards on an airplane used for indicating passengers or outboard resue personnel of the location of emergency exits and doors and their means of opening must be at least in Chinese; and all the operation instructions of airplane emergency equipment that may be used by passengers must be at least in Chinese.

（3）按适航管理文件 AA2002093 号规定，应当符合驾驶舱门和保安规定。
As per Airworthiness Management Document No. AA2002093, the pilot compartment doors and the security considerations should comply with:

§ 25.772 驾驶舱舱门
对于驾驶舱和客舱之间装有可锁舱门的飞机，
（a） 对于最大客座量超过 20 座的飞机，应急出口构型必须设计为使机组成员或旅客均不必通过上述舱门即可达到为他们设置的应急出口；并且
（b） 如果驾驶舱门卡住时必须有措施使机组成员能直接从驾驶舱进入客舱；并且
（c） 在机组失能的情况下必须有应急方法使乘务员能进入驾驶舱。
§ 25.772 Pilot compartment doors.

For an airplane that has a lockable door installed between the pilot compartment and the passenger compartment:
(a) For airplanes with a maximum passenger seating configuration of more than 20 seats, the emergency exit configuration must be designed so that neither crewmembers nor passengers require use of the flightdeck door in order to reach the emergency exits provided for them;
(b) Means must be provided to enable flight crewmembers to directly enter the passenger compartment from the pilot compartment if the cockpit door becomes jammed.
(c) There must be an emergency means to enable a flight attendant to enter the pilot compartment in the event that the flightcrew becomes incapacitated.

§ 25.795 保安因素
（a） 驾驶舱保护。如果运行规定要求具备驾驶舱门，则门的安装必须设计为：
(1) 阻止非授权人员暴力闯入，并在门的关键部位能承受 300 焦耳（221.3 英尺-磅）的冲击，包括门的把手能承受 250 磅（1113 牛顿）的恒定拉力，并且
(2) 抗小型手枪和爆破设备击穿能力达等效于（NIJ）0101.04 标准。

§ 25.795 Security considerations.
(a) Protection of flightdeck. If a flightdeck door is required by operating rules, the door installation must be designed to:
(1) Resist forcible intrusion by unauthorized persons and be capable of withstanding impacts of 300 Joules (221.3 foot-pounds) at the critical locations on the door, as well as a 250 pound (1113 Newtons) constant tensile load on the knob or handle, and
(2) Resist penetration by small arms fire and fragmentation devices to a level equivalent to level IIIa of the National Institute of Justice Standard (NIJ) 0101.04.

（4）每驾飞机必须安装快速接近存取记录器（QAR）（参见 CAD97-MULT-38）
Quick Access Recorder (QAR) must be installed on each aircraft (reference to CAD97-MULT-38).

（5）高度表高度显示为米制。
Altimeter should display flight altitude with the metric system.

第 2 部分
SECTION 2

I – ERJ 190-100 STD 型（运输类），ANAC 于 2005 年 8 月 30 日批准，CAAC 于 2008 年 5 月 12 日认可。

Model ERJ 190-100 STD (Transport Category), approved by ANAC on 30 August 2005, validated by CAAC on 12 May 2008.

发动机/ENGINE

两台通用电气公司（GE）CF34-10E5/CF34-10E5A1/CF34-10E6/CF34-10E6A1/CF34-10E7 型发动机。见注释 8。/Two General Electric Engines (GE) model CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7.See Note 8.

辅助动力装置/APU

Hamilton Sundstrand APS 2300 型/Hamilton Sundstrand model APS 2300.

燃油/FUEL

巴西规范 ANP No. 1/2003 – QAV1;
美国 ASTM 规范 D-1655 JET A or JET A1;
美国军用规范 MIL-T-83133A JP-8;
中国 3 号喷气燃油（GB6537-94）

辅助动力装置限制/APU LIMITS

每分钟最大转速/Maximum RPM: 108%
最大发动机燃气温度/Maximum EGT: 1,032°C (起动/Start)
717°C (连续工作/Running)

其它限制见 Hamilton Sundstrand 文件 ESR 1235。
Other limitations as stated in Hamilton Sundstrand Document No ESR 1235.

滑油/OIL

发动机，辅助动力装置（APU）和组合驱动发电装置（IDG）滑油规范：MIL-PRF-7808 或 MIL-PRF-23699。/Engine, APU and IDG: MIL-PRF-7808 or MIL-PRF-23699.

空速限制/AIRSPEED LIMITS

最大运行限制速度/Maximum operating limit speed (V_{MO}):
- 0 m 到/to 2,438 m (*): 556 km/h (300 keas)
- 3,048 m 到/to 8,805 m (*): 593 km/h (320 keas)
- 8,805 m 到/to 12,497 m: 0.82 马赫/0.82Mach

(*) 从 2,438 m 到 3,048 m 线性变化。/Linear variation from 2,438 m to 3,048 m.

机动速度/Maneuvering speed (V_A):
- 0 m(*): 463 km/h (250keas)
- 7,800 m (*): 512 km/h (276keas)
- 9,962 m (*): 515 km/h (278keas)
- 9,962 m 到/to 12,497 m: 0.82 马赫/Mach

(*)在 0 m，7,800 m 和 9,962 m 之间线性变化。/Linear variation between 0 m, 7,800 m and 9,962 m.

襟翼最大伸出速度/Maximum flap extended speed (V_{FE}):

	• 襟翼位置 1/Flap Position 1:	426 km/h (230 keas)
	• 襟翼位置 2/Flap Position 2:	398 km/h (215 keas)
	• 襟翼位置 3/Flap Position 3:	370 km/h (200 keas)
	• 襟翼位置 4/Flap Position 4:	333 km/h (180 keas)
	• 襟翼位置 5/Flap Position 5:	333 km/h (180 keas)
	• 全襟翼位置/ Flap Position Full:	306 km/h (165 keas)
	最大起落架操作速度/Maximum landing gear operating speed (V_{LO}):	
	• 收起/Retraction:	463 km/h (250 keas*)
	• 放下/ Extension:	491 km/h (265 keas*) * keas 直到 6,096 m/keas up to 6,096 m
	最大放起落架速度/Maximum landing gear extended speed (V_{LE}):	491 km/h (265 keas)
	轮胎最大地面速度/Maximum tire ground speed:	362 km/h (225 mph)

重量重心范围/C.G.RANGE (起落架放下/landing gear extended)	47,790 kg	16,117 mm 到/to 16953 mm (6% 到/to 28.7% MAC)	
	47,000 kg	16,117 mm 到/to 16964 mm (6% 到/to 29% MAC)	
	37,000 kg	16,117 mm 到/to 16964 mm (6%到/to 29% MAC)	
	31,500 kg	16,117 mm 到/to 16839 mm (6%到/to 25.6% MAC)	
	30,600 kg	16,817 mm (25% MAC)	
	29,500 kg	16,573 mm (18.4% MAC)	
(飞行限制范围/flight limit extension)	47,790 kg	16,043 到/to 17,026 mm (4%到/to 30.7% MAC)	
	47,000 kg	16,043 mm 到/to 17,037 mm (4%到/to 31% MAC)	
	37,000 kg	16,043 mm 到/to 17,037 mm (4%到/to 31% MAC)	
	31,500 kg	16,043 mm 到/to 16,912 mm (4%到/to 27.6% MAC)	
	30,600 kg	16,890 mm (27% MAC)	

各给定点之间直线变化。/Straight-line variation between the points given.

因起落架收起导致的弯矩/Moment due to landing gear retraction:

- - 418,500 kg x mm.
  (随着收起飞机重量重心向前运动。/The aircraft CG is moved forward with the retraction.)

受各点限制的范围：起飞时不允许 30,100kg(22% MAC),30,600kg (25% MAC), 37,000kg (29% MAC)和 40,400kg (29% MAC)。/The area limited by the points: 30,100 kg (22% MAC), 30,600 kg (25% MAC), 37,000 kg (29% MAC) and 40,400 kg (29% MAC) is not allowed for takeoff.

最大重量/MAXIMUM WEIGHT	停机坪/Ramp:	47,950 kg
	起飞/Takeoff:	47,790 kg
	着陆/Landing:	43,000 kg
	零燃油/Zero Fuel:	40,800 kg
最大载客数/MAXIMUM PASSENGERS	108	

最大行李重量/MAXIMUM BAGGAGE	货舱/Cargo compartment	最大载荷/Maximum load (kg)
	• 前/ Forward:	1,850
	• 后/ Aft:	1,650
燃油油量/FUEL CAPACITY	最大可用燃油：16,152.6 公升(在+16,378mm 处两个 8,076.3 公升的油箱)/Maximum usable fuel:16,152.6liters(two tanks of 8,076.3 liters at +16,378 mm). 不可用燃油量：113.4 公升（每个燃油箱 56.7 公升，公斤与公升之比为 0.811）/Unusable fuel:113.4 liters (56.7 liters at 0.811 kg/liter in each tank).	

II – ERJ 190-100 LR 型（运输类），ANAC 于 2005 年 8 月 30 日批准，CAAC 于 2008 年 5 月 12 日认可。

Model ERJ 190-100 LR(Transport Category), approved by ANAC on 30 August 2005, validated by CAAC on 12 May 2008.

发动机/ENGINE	两台通用电气公司（GE）CF34-10E5，CF34-10E5A1，CF34-10E6, CF34-10E6A1 和 CF34-10E7 型发动机。见注释 8。/Two General Electric Engines (GE) model CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7.See Note 8.
辅助动力装置/APU	Hamilton Sundstrand APS 2300 型/Hamilton Sundstrand model APS 2300.
燃油/FUEL	巴西规范 ANP No. 1/2003 – QAV1; 美国 ASTM 规范 D-1655 JET A or JET A1; 美国军用规范 MIL-T-83133A JP-8; 中国 3 号喷气燃油（GB6537-94）
辅助动力装置限制/APU LIMITS	每分钟最大转速/Maximum RPM: 108% 最大发动机燃气温度/Maximum EGT: 1,032°C (起动/Start) 717°C (连续工作/Running) 其它限制见 Hamilton Sundstrand 文件 ESR 1235。 Other limitations as stated in Hamilton Sundstrand Document No ESR 1235.
滑油/OIL	发动机，辅助动力装置（APU）和组合驱动发电装置（IDG）滑油规范：MIL-PRF-7808 或 MIL-PRF-23699。/Engine, APU and IDG: MIL-PRF-7808 or MIL-PRF-23699.
空速限制/AIRSPEED LIMITS	最大运行限制速度/Maximum operating limit speed (V_{MO}): • 0 m 到/to 2,438 m (*): 556 km/h (300 keas) • 3,048 m 到/to 8,805 m (*): 593 km/h (320 keas) • 8,805 m 到/to 12,497 m: 0.82 马赫/Mach (*)从 2,438 m 到 3,048 m 线性变化。/Linear variation from 2,438 m to 3,048 m.

机动速度/Maneuvering speed (V_A):

• 0 m(*):	463 km/h (250 keas)
• 7 ,800 m (*):	512 km/h (276 keas)
• 9 ,962 m (*):	515 km/h (278 keas)
• 9 ,962 m 到/to 12,497 m:	0.82 马赫/Mach

(*)在 0 m，7,800 m 和 9,962 m 之间线性变化。/Linear variation between 0, 7,800 m and 9,962 m.

襟翼最大伸出速度/Maximum flap extended speed (V_{FE}):

• 襟翼位置 1/Flap Position 1:	426 km/h (230 keas)
• 襟翼位置 2/Flap Position 2:	398 km/h (215 keas)
• 襟翼位置 3/Flap Position 3:	370 km/h (200 keas)
• 襟翼位置 4/Flap Position 4:	333 km/h (180 keas)
• 襟翼位置 5/Flap Position 5:	333 km/h (180 keas)
• 全襟翼位置 Flap Position Full:	306 km/h (165 keas)

最大起落架操作速度/Maximum landing gear operating speed (V_{LO}):

• 收起/Retraction	463 km/h (250 keas)
• 放下/ Extension	491 km/h (265 keas) * keas 直到 6,096 m/keas up to 6,096 m

最大放起落架速度/Maximum landing gear extended speed (V_{LE}): 491 km/h (265 keas)

轮胎最大地面速度/Maximum tire ground speed: 362 km/h (225 mph)

重量重心范围/**C. G. RANGE**	50,300 kg	16,220 mm 到/to 16,912 mm (8,8%到/to 27.6% MAC)
((起落架放下/landing gear extended)	48,090 kg	16,117 mm to 16,945 mm (6%到/to 28,5% MAC)
	47,000 kg	16,117 mm 到/to 16,964 mm (6%到/to 29% MAC)
	37,000 kg	16,117 mm 到/to 16,964 mm (6%到/to 29% MAC)
	31,500 kg	16,117 mm 到/to 16,839 mm (6%到/to 25.6% MAC)
	30,600 kg	16,817 mm (25% MAC)
	29,500 kg	16,573 mm (18.4% MAC)
(飞行限制范围/flight limit extension)	50,300 kg	16,146 到/to 16,986 mm (6,8%到/to 29.6% MAC)
	48,090 kg	16,043 mm 到/to 17,019 mm (4%到/to 30,5% MAC)
	47,000 kg	16,043 mm 到/to 17,037 mm (4%到/to 31% MAC)
	37,000 kg	16,043 mm 到/to 17,037 mm (4%到/to 31% MAC)
	31,500 kg	16,043 mm 到/to 16,912 mm (4%到/to 27.6% MAC)
	30,600 kg	16,890 mm (27% MAC)

各给定点之间直线变化。/Straight-line variation between the points given.
因起落架收起导致的弯矩/Moment due to landing gear retraction:
- - 418,500 kg x mm.
(随着收起飞机重量重心向前运动/The aircraft CG is moved forward with the retraction.)

受各点限制的范围：起飞时不允许 30,100kg(22% MAC),30,600kg (25% MAC), 37,000kg (29% MAC)和 40,400kg (29% MAC)。/The area limited by the points: 30,100 kg (22% MAC), 30,600 kg (25% MAC), 37,000 kg (29% MAC) and 40,400 kg (29% MAC) is not allowed for takeoff.

最大重量/MAXIMUM WEIGHT

停机坪/Ramp:	50,460 kg
起飞/Takeoff:	50,300 kg
着陆/Landing:	43,000 kg
零燃油/Zero Fuel:	40,800 kg

最大载客数/MAXIMUM PASSENGERS

108

最大行李重量/MAXIMUM BAGGAGE

货舱/Cargo compartment	最大载荷/Maximum load (kg)
• 前/ Forward:	1,850
• 后/ Aft:	1,650

燃油油量/FUEL CAPACITY

最大可用燃油：16,152.6 公升(在+16,378 mm 处两个 8,076.3 公升的油箱)/Maximum usable fuel:16,152.6 liters(two tanks of 8,076.3 liters at +16,378 mm).
不可用燃油量：113.4 公升（每个燃油箱 56.7 公升，公斤与公升之比为 0.811）/Unusable fuel: 113.4 liters (56.7 liters at 0.811 kg/liter in each tank).

合格的系列号/Serial Numbers Eligible

190-00004， 190-00006 及其后续者/190-00004, 190-00006 and subsequent.

III – ERJ 190-100 IGW 型（运输类），ANAC 于 2005 年 8 月 30 日批准，CAAC 于 2008 年 5 月 12 日认可。

Model ERJ 190-100 IGW (Transport Category), approved by ANAC on 30 August 2005, validated by CAAC on 12 May 2008.

发动机/ENGINE

两台通用电气公司（GE）CF34-10E5，CF34-10E5A1，CF34-10E6, CF34-10E6A1 和 CF34-10E7 型发动机。见注释 8。/Two General Electric Engines (GE) model CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7. See Note 8.

辅助动力装置/APU

Hamilton Sundstrand APS 2300 型/Hamilton Sundstrand model APS 2300.

燃油/FUEL

巴西规范 ANP No. 1/2003 – QAV1;
美国 ASTM 规范 D-1655 JET A or JET A1;

美国军用规范 MIL-T-83133A JP-8;
中国 3 号喷气燃油（GB6537-94）

辅助动力装置限制/APU LIMITS

每分钟最大转速/Maximum RPM: 108%
最大发动机燃气温度/Maximum EGT: 1,032°C (起动/Start)
717°C (连续工作/Running)
其它限制见 Hamilton Sundstrand 文件 ESR 1235。
Other limitations as stated in Hamilton Sundstrand Document No ESR 1235.

滑油/OIL

发动机，辅助动力装置（APU）和组合驱动发电装置（IDG）滑油规范：MIL-PRF-7808 或 MIL-PRF-23699。/Engine, APU and IDG: MIL-PRF-7808 or MIL-PRF-23699.

空速限制/AIRSPEED LIMITS

最大运行限制速度/Maximum operating limit speed (V_{MO}):

- 0 m 到/to 2,438 m (*): 556 km/h (300 keas)
- 3 ,048 m 到/to 8,805 m (*): 593 km/h (320 keas)
- 8 ,805 m 到/to 12,497 m: 0.82 Mach

(*)从 2,438 m 到 3,048 m 线性变化。/Linear variation from 2,438 m to 3,048 m.

机动速度/Maneuvering speed (V_A):

- 0 m (*): 463 km/h (250 keas)
- 7 ,800 m (*): 512 km/h (276 keas)
- 9 ,962 m (*): 515 km/h (278 keas)
- 9 ,962 m 到/to 12,497 m: 0.82 Mach

(*)在 0 m，7,800 m 和 9,962 m 之间线性变化。/Linear variation between 0, 7,800 m and 9,962 m.

襟翼最大伸出速度/Maximum flap extended speed (V_{FE}):

- 襟翼位置 1/Flap Position 1: 426 km/h (230 keas)
- 襟翼位置 2/Flap Position 2: 398 km/h (215 keas)
- 襟翼位置 3/Flap Position 3: 370 km/h (200 keas)
- 襟翼位置 4/Flap Position 4: 333 km/h (180 keas)
- 襟翼位置 5/Flap Position 5: 333 km/h (180 keas)
- 全襟翼位置/ Flap Position Full: 306 km/h (165 keas)

最大起落架操作速度/Maximum landing gear operating speed (V_{LO}):

- 收起/Retraction: 463 km/h (250 keas)
- 放下/ Extension: 491 km/h (265 keas)
  * keas 直到 6,096 m/keas up to 6,096 m

最大放起落架速度/Maximum landing gear extended speed (V_{LE}): 491 km/h (265 keas)

轮胎最大地面速度/Maximum tire ground speed: 362 km/h (225 mph)

重量重心范围/C. G. RANGE

51,800 kg 16,290 mm 到/to 16,890 mm (10.7%到/to 27% MAC)

(起落架放下/landing gear extended)	48,090 kg	16,117 mm 到/to 16,945 mm (6%到/to 28.5% MAC)
	47,000 kg	16,117 mm 到/to 16,964 mm (6%到/to 29% MAC)
	37,000 kg	16,117 mm 到/to 16,964 mm (6%到/to 29% MAC)
	31,500 kg	16,117 mm 到/to 16,839 mm (6%到/to 25.6% MAC)
	30,600 kg	16,817 mm (25% MAC)
	29,500 kg	16,573 mm (18.4% MAC)
(飞行限制范围/flight limit extension)	51,800 kg	16,216 mm 到/to 16,964 mm (8.7%到/to 29% MAC)
	48,090 kg	16,043 mm 到/to 17,019 mm (4%到/to 30.5% MAC)
	47,000 kg	16,043 mm 到/to 17,037 mm (4%到/to 31% MAC)
	37,000 kg	16,043 mm 到/to 17,037 mm (4%到/to 31% MAC)
	31,500 kg	16,043 mm 到/to 16,912 mm (4%到/to 27.6% MAC)
	30,600 kg	16,890 mm (27% MAC)

各给定点之间直线变化。/Straight-line variation between the points given.

因起落架收起导致的弯矩/Moment due to landing gear retraction:

- - 418,500 kg x mm.
  (随着收起飞机重量重心向前运动/The aircraft CG is moved forward with the retraction.)

受各点限制的范围：起飞时不允许 30,100kg(22% MAC),30,600kg (25% MAC), 37,000kg (29% MAC)和 40,400kg (29% MAC)。/The area limited by the points: 30,100 kg (22% MAC), 30,600 kg (25% MAC), 37,000 kg (29% MAC) and 40,400 kg (29% MAC) is not allowed for takeoff.

最大重量/MAXIMUM WEIGHT

停机坪/Ramp:	51,960 kg
起飞/Takeoff:	51,800 kg 见注 9/see Note 9
着陆/Landing:	44,000 kg
零燃油/Zero Fuel:	40,900 kg

最大载客数/MAXIMUM ASSENGERS

108

最大行李重量/MAXIMUM BAGGAGE

货舱/Cargo compartment	最大载荷/Maximum load (kg)
• 前/ Forward	1,850
• 后/ Aft	1,650

燃油油量/FUEL CAPACITY

最大可用燃油：16,152.6 公升(在+16,378 mm 处两个 8,076.3 公升的油箱) /Maximum usable fuel:16,152.6 liters (two tanks of 8,076.3 liters at +16,378 mm).

不可用燃油量：113.4 公升（每个燃油箱 56.7 公升，公斤与公升之比为 0.811）/Unusable fuel: 113.4 liters (56.7 liters at 0.811 kg/liter in each tank).

合格的系列号/Serial Numbers Eligible

190-00004，190-00006 及其后续者/190-00004, 190-00006 and subsequent.

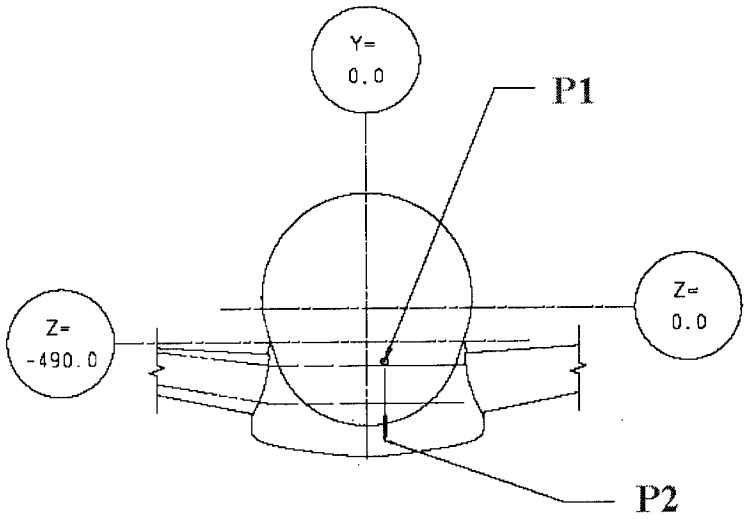
与所有 ERJ 190-100 型别有关的数据
DATA PERTINENT TO ALL ERJ 190-100 MODELS

数据/DATUM

到机身中线的垂直平面位于机翼根部前长桁前 14,443 mm 处。该长桁位于机翼顶撑点前 443 mm 处。/ A perpendicular plane to the fuselage centerline, located at 14,443 mm ahead of the wing stub front spar. This spar is located 414 mm ahead of the wing jack point.

水平测量/LEVELING MEANS

P1 到 P2 的垂直线位于左侧起落架舱内部，如下图所示/Plumb line between the points P1 to P2 located inside the landing gear compartment on the left side, as illustrated below.
下表给出的是水平测量机身坐标点 The table in following figure gives the leveling of fuselage coordinate points。



LEVELING OF FUSLG COORDINATE POINTS

POINT	X	Y	Z
P1	17955.20	-250.00	-774.872
P2	17955.20	-250.00	-1683.47

平均气动弦/MEAN AERODYNAMIC CHORD

长度/Length: 3,682 mm.
平均气动弦前缘/Leading edge of mean aerodynamic chord:
X: 15,896 mm
Y: -5,644 mm
Z: -663 mm

审定基础/CERTIFICATION BASIS

与 FAR 25 相当的 RBHA 25 (运输类飞机适航要求),包括下列修正案/Airworthiness Requirements - Transport Category Aircraft),corresponding to FAR 25, including amendments:
25-1 到 25-101 修正案加上下列修正案/25-1 through 25-101, plus the following amendments:

- 修正案 25-102,25.981(c)段除外/Amendment 25-102, except paragraph 25.981(c);
- 修正案 25-103(完整的)/Amendment 25-103, integral;
- 修正案 25-104(完整的)/Amendment 25-104, integral;
- 修正案 25-105(完整的)/Amendment 25-105, integral;
- 修正案 25-107,25. 735(h)段除外/Amendment 25-107, except paragraph 25.735(h);

- 修正案 25-108(完整的)/Amendment 25-108, integral;
- 修正案 25-109(完整的)/Amendment 25-109, integral;
- 修正案 25-110(完整的)/Amendment 25-110, integral;
- 修正案 25-112(完整的)/Amendment 25-112, integral;
- 修正案 25-113(完整的)/Amendment 25-113, integral;
- 修正案 25-114(完整的),和/Amendment 25-114, integral; and
- 修正案 25-117(完整的)/Amendment 25-117, integral.

专用条件/Special Conditions:

- FCAR HES-01:发动机突然停车的发动机扭矩载荷/Engine torque loads for sudden engine stoppage (RBHA 21.16; RBHA/FAR 25.361);
- FCAR HES-06:系统和结构的相互作用/Interaction of systems and structures (RBHA 21.16; RBHA/FAR 25.671 和/and 25.1309);
- FCAR HSI-01:高强度辐射场(HIRF)防护/High intensity radiated fields (HIRF) protection (RBHA 21.16, RBHA/FAR 25.1309, 25.1333, 25.1431 和/and 25.1529);
- FCAR HSI-02:非正常电源下的运行/Operation without normal electrical power (RBHA 21.16, RBHA/FAR 25.1165(b), 25.1309, 25.1333(b) 和/and 25.1351);
- FCAR HDE-02:电子飞行控制系统:操纵面位置提示/Electronic flight control system: control surface position awareness (RBHA 21.16, RBHA/FAR 21.16, 25.143, 25.671 和/and 25.672);和/and
- FCAR HDE-17:复飞期间对 ATTCS 性能的信任/Performance credit for ATTCS during go-around (RBHA 21.16, RBHA 25.117, 25.119(a), 25.121(d), 25.904, 25.1309 和/and Appendix I).

等效安全判定/Equivalent Levels of Safety Findings:

- FCAR HES-13：检查机动载荷/Checked maneuver loads (RBHA 21.21(b)(1); RBHA/FAR 25.331(c)(2));
- FCAR HES-19:燃油箱适坠性/Fuel tank crashworthiness (RBHA 21.21(b)(1); RBHA/FAR 25.721 和/and 25.963(d));
- FCAR HES-20:较小坠毁的判据/Minor crash criteria (RBHA 21.21(b)(1); RBHA/FAR 25.721 和 and 25.963(d));
- FCAR HES-36:应急出口定位标志/Emergency exit locator signs (RBHA 21.21(b)(1); RBHA/FAR 25.811(d)(3)).
- FCAR HSI-15:设备、系统及其安装/Equipment, systems and installations (RBHA 21.21(b)(1); RBHA/FAR 25.1309);
- FCAR HSI-27:航行灯的等效安全判定/Equivalent level of safety finding for position lights (RBHA 21.21(b)(1); RBHA/FAR 25.1389(b), 25.1391, 25.1393 和 and 25.1395);
- FCAR HSI-38:座舱通风-湿度要求/Cabin ventilation – humidity requirement (RBHA 21.21(b)(1), RBHA/FAR 25.831(g));
- FCAR HDE-16:对减少推力起飞期间使用自动功率储备性能的信任/Performance credit for use of automatic power reserve (APR) during reduced thrust takeoffs (RBHA 21.21(b)(1); RBHA/FAR 25.904, 25.149 和/and Appendix I);

- FCAR HPR-06:飞行关键反推/Flight critical thrust reverser (RBHA 21.21(b)(1); RBHA/FAR 25.933(a)(1)(ii) 和/and 25.1309(b)(1);
- FCAR HPR-14：仅有数字显示的涡轮发动机高-中压力转子速度(N2)/Digital only display of turbine engine high/intermediate pressure rotor speed (N2) (RBHA 21.21(b)(1); RBHA/FAR 25.901, 25.1305, 25.1309, 25.1321 和/and 25.1549);
- FCAR HPR-17：采纳辅助动力装置协调要求/Adoption of APU harmonized requirements (RBHA 21.21(b)(1); RBHA/FAR 25 Subparts E, F 和/and G);和/and
- FCAR HPR-23：缺少 ATTCS 系统接通-断开开关/Lack of on/off switch for ATTCS system (RBHA 21.21(b)(1); RBHA/FAR 25.117, 25.119(a), 25.121(d), 25.904, 25.1301, 25.1309, Appendix I).

豁免/Exemptions:

- 非包容发动机爆裂转子击中增压舱/Uncontained engine rotor burst hitting pressurized cabin [RBHA/FAR 25.841(a)(2)(i) and (ii)] – 经有效日期为 2005 年 6 月 28 日的 DAC（ANAC）595/DGAC 号布告同意/Granted through Ordinance DAC (ANAC) No. 595/DGAC, dated 28 June 2005; 和/and
- 不可控高发动机推力/Uncontrollable high engine thrust [RBHA/FAR 25.901(c)] -经有效日期为 2005 年 6 月 16 日的 DAC（ANAC）548/DGAC 号布告同意/Granted through Ordinance DAC (ANAC) No. 548/DGAC, dated 16 June 2005.

噪声标准/Noise Standards:

- RBHA 36 部（型号合格审定的噪声标准），与 ICAO 的附件 16 第 1 卷第 3 章（第 3 版）相当，并且包括在 ANAC 进行 ERJ-190 合格审定日期有效的所有修正案/RBHA 36 (Noise Standard - Type Certification), corresponding to ICAO Annex 16, Volume I Chapter 3 (third edition), and including all amendments effective on the date the ERJ-190 certification by the ANAC.

燃油排泄和排气派出物要求/Fuel venting and exhaust emission requirements:

- RBHA 34 部（型号合格审定的涡轮发动机飞机燃油排泄和排气派出物要求），与 FAR 34 相当，并包括在 ANAC 进行 ERJ-190 合格审定日期有效的修正案/RBHA 34 (Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes - Type Certification), corresponding to the FAR 34 and including the amendment effective on the date the ERJ-190 certification by the ANAC.

按照下列要求进行选装设计/Optional design requirements complied with:

- RBHA/FAR 25.801 – 水上迫降/Ditching;

- RBHA/FAR 25.1403 – 机翼结冰探测灯/Wing icing detection lights;
- RBHA/FAR 25.1411 和/and 25.1415 – 为水上迫降合格审定要求的安全设备/Safety equipment required for ditching certification;
- RBHA/FAR 25.1419 – 冰保护/Ice protection; 和/and
- RBHA/FAR 25.1421 – 扩音器/Megaphones.

型号合格申请日期/Application date for type certification:
- ERJ 190-100 STD: 2001 年 5 月 30 日/30 May 2001;
- ERJ 190-100 LR: 2001 年 5 月 30 日/30 May 2001;
- ERJ 190-100 IGW: 2001 年 5 月 30 日/30 May 2001; 和/and

所有 ERJ 190-100 型别的请求合格审定日期是 2001 年 5 月 30 日/Date to require the type certification of all ERJ 190-100 models: 30 May 2001.

生产基础/PRODUCTION BASIS

生产批文为 2005 年 9 月 14 日生效的 CHE E-7203-01/
Production approved under CHE E-7203-01, dated 14 Sep. 2005.

要求的设备/REQUIRED EQUIPMENT

相关适航规章（见合格审定基础）要求的基本设备必须安装在飞机上。批准的设备列于 Embraer 技术报告 190-100TDSD。ANAC 批准的编号为 AFM-1868 的飞机飞行手册必须装在飞机上。/The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the airplane. The approved equipment is listed in the Embraer Technical Report 190-100TDSD.The ANAC approved airplane flight manual P/N AFM-1868 must be on board.

IV –ERJ 190-200 STD 型飞机（运输类），ANAC 于 2006 年 6 月 30 日批准，CAAC 于 2008 年 5 月 12 日认可。

Model ERJ 190-200 STD (Transport Category), approved by ANAC on 30 June 2006, validated by CAAC on 12 May 2008.

发动机/ENGINE

两台通用电气公司（GE）CF34-10E5，CF34-10E5A1，CF34-10E6, CF34-10E6A1 和 CF34-10E7 型发动机。见注释 8。/Two General Electric Engines (GE) model CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7.See Note 8.

辅助动力装置/APU

Hamilton Sundstrand APS 2300 型/Hamilton Sundstrand model APS 2300.

燃油/FUEL

巴西规范 ANP No. 1/2003 – QAV1;
美国 ASTM 规范 D-1655 JET A or JET A1;
美国军用规范 MIL-T-83133A JP-8;
中国 3 号喷气燃油（GB6537-94）

辅助动力装置限制/APU LIMITS

每分钟最大转速/Maximum RPM:	108%
最大发动机燃气温度/Maximum EGT:	1,032°C (起动/Start)
	717°C (连续工作/Running)

其它限制见 Hamilton Sundstrand 文件 ESR 1235。
Other limitations as stated in Hamilton Sundstrand Document No ESR 1235.

滑油/OIL

发动机，辅助动力装置（APU）和组合驱动发电装置（IDG）滑油规范：MIL-PRF-7808 或 MIL-PRF-23699/Engine, APU and IDG: MIL-PRF-7808 or MIL-PRF-23699.

空速限制/AIRSPEED LIMITS

最大运行限制速度(V_{MO})/Maximum operating limit speed (V_{MO}):

- 0 m 到/to 2,438 m (*): 556 km/h (300 keas)
- 3 ,048 m 到/to 8,805 m (*): 593 km/h (320 keas)
- 8 ,805 m 到/to 12,497 m: 0.82 马赫/0.82 Mach

(*)从 2,438 m 到 3,048 m 线性变化。/Linear variation from 2,438 m to 3,048 m.

机动速度/Maneuvering speed (V_A):

- 0 m(*): 469 km/h (253 keas)
- 7 ,800 m (*): 515 km/h (278 keas)
- 9 ,920 m (*): 517 km/h (279 keas)
- 9 ,920 m 到/to 12,497 m: 0.82 Mach

(*)在 0 m，7,800 m 和 9,920 m 之间线性变化。/Linear variation between 0, 7 800 m and 9 920 m.

最大襟翼放下速度(V_{FE})/Maximum flap extended speed (V_{FE}):

- 襟翼位置 1/Flap Position 1: 426 km/h (230 keas)
- 襟翼位置 2/Flap Position 2: 398 km/h (215 keas)
- 襟翼位置 3/Flap Position 3: 370 km/h (200 keas)
- 襟翼位置 4/Flap Position 4: 333 km/h (180 keas)
- 襟翼位置 5/Flap Position 5: 333 km/h (180 keas)
- 全襟翼位置/ Flap Position Full: 306 km/h (165 keas)

最大起落架操作速度(V_{LO})/Maximum landing gear operating speed (V_{LO})

- 收起/ Retraction: 463 km/h (250 keas*)
- 放下/ Extension: 491 km/h (265 keas*)

* keas 直到 6096 m /keas up to 6096 m

最大放起落架速度(V_{LE})/Maximum landing gear extended speed (V_{LE}): 491 km/h (265 keas)

轮胎最大地面速度/Maximum tire ground speed: 362 km/h (225 mph)

重量重心范围/CG RANGE

(起落架伸出/landing gear extended)

48,790 kg	16,966 mm 到/to 17,849 mm (7% 到/to 31% MAC)
38,000 kg	16,966 mm 到/to 17,849 mm (7% 到/to 31% MAC)
31,800 kg	16,966 mm 到/to 17,724 mm (7% 到/to 27.6% MAC)
30,600 kg	17,702 mm (27% MAC)
29,500 kg	17,285 mm (18.4% MAC)

(飞行限制范围/flight limit extension)

48,790 kg	16,892 mm 到/to 17,905 mm (5% 到/to 32.5% MAC)
38,000 kg	16,892 mm 到/to 17,905 mm (5% 到/to 32.5% MAC)
31,800 kg	16,892 mm 到/to 17,776 mm (5% 到/to 29% MAC)

CG RANGE (Cont.)	30,600 kg 17,757 mm (28,5% MAC) 48,790 kg 16,966 mm 到/to 17,849 mm (7 到/to 31% MAC) 38,000 kg 16,966 mm 到/to 17,849 mm (7 到/to 31% MAC) 各给定点之间直线变化。/Straight-line variation between the points given. 因起落架收起导致的弯矩。/Moment due to landing gear retraction: • - 418,500 kg x mm. (随着收起飞机重量重心向前运动/The aircraft CG is moved forward with the retraction.) 受各点限制的范围：起飞时不允许 30,100kg(22% MAC),30,600kg (27% MAC), 38,000kg (31% MAC)和 43,400kg (31% MAC)。/The area limited by the points: 30,100 kg (22% MAC), 30,600 kg (27% MAC), 38,000 kg (31% MAC) and 43,400 kg (31% MAC) is not allowed for takeoff.
最大重量/MAXIMUM WEIGHT	停机坪/Ramp: 48,950 kg 起飞/Takeoff: 48,790 kg 着陆/Landing: 45,000 kg 零燃油/Zero Fuel: 42,500 kg
最大载客数/MAXIMUM PASSENGERS	118
最大行李重量/MAXIMUM BAGGAGE	货舱/Cargo Compartment: 最大载荷/Maximum Load (kg): • 前/Forward 1,900 • 后/Aft 1,800
燃油油量/FUEL CAPACITY	最大可用燃油：16,152.6 公升(在+17,191 mm 处两个 8,076.3 公升的油箱) /Maximum usable fuel:16,152.6 liters (two tanks of 8,076.3 liters at +16,378 mm). 不可用燃油量：113.4 公升（每个燃油箱 56.7 公升，公斤与公升之比为 0.811）/Unusable fuel: 113.4 liters (56.7 liters at 0.811 kg/liter in each tank).
合格的系列号/SERIAL NUMBERS ELIGIBLE	190-00005，190-00029 及其后续者/190-00005, 190-00029 and subsequent.

V –ERJ 190-200 LR 型飞机（运输类），ANAC 于 2006 年 6 月 30 日批准，CAAC 于 2008 年 5 月 12 日认可。

Model ERJ 190-200 LR (Transport Category), approved by ANAC on 30 June 2006, validated by CAAC on 12 May 2008.

发动机/ENGINE	两台通用电气公司（GE）CF34-10E5，CF34-10E5A1，CF34-10E6, CF34-10E6A1 和 CF34-10E7 型发动机。见注释 8。/Two General Electric Engines (GE) model CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7.See Note 8.
辅助动力装置/APU	Hamilton Sundstrand APS 2300 型/Hamilton Sundstrand model APS

2300.

燃油/FUEL

巴西规范 ANP No. 1/2003 – QAV1;
美国 ASTM 规范 D-1655 JET A or JET A1;
美国军用规范 MIL-T-83133A JP-8;
中国 3 号喷气燃油（GB6537-94）

辅助动力装置限制/APU LIMITS

每分钟最大转速/Maximum RPM: 108%

最大发动机燃气温度/Maximum EGT: 1,032°C (起动/Start)
717°C (连续工作/Running)

其它限制见 Hamilton Sundstrand 文件 ESR 1235。
Other limitations as stated in Hamilton Sundstrand Document No ESR 1235.

滑油/OIL

发动机，辅助动力装置（APU）和组合驱动发电装置（IDG）滑油规范：MIL-PRF-7808 或 MIL-PRF-23699。/Engine, APU and IDG: MIL-PRF-7808 or MIL-PRF-23699.

空速限制/AIRSPEED LIMITS

最大运行限制速度(V_{MO})/Maximum operating limit speed (V_{MO}):

- 0 m 到/to 2,438 m (*): 556 km/h (300 keas)
- 3 ,048 m 到/to 8,805 m (*): 593 km/h (320 keas)
- 8 ,805 m 到/to 12,497 m: 0.82 Mach

(*)从 2,438 m 到 3,048 m 线性变化。/Linear variation from 2,438 m to 3,048 m.

机动速度(V_A)/Maneuvering speed (V_A):

- 0 m (*): 469 km/h (253 keas)
- 7 ,800 m (*): 515 km/h (278 keas)
- 9 ,920 m (*): 517 km/h (279 keas)
- 9 ,920 m 到/to 12,497 m: 0.82 马赫/0.82 Mach

(*) 在 0m,7,800m 和 9,962m 之间线性变化。/Linear variation between 0, 7,800 m and 9,962 m.

最大襟翼放下速度(V_{FE})/Maximum flap extended speed (V_{FE}):

- 襟翼位置 1/Flap Position 1: 426 km/h (230 keas)
- 襟翼位置 2/Flap Position 2: 398 km/h (215 keas)
- 襟翼位置 3/Flap Position 3: 370 km/h (200 keas)
- 襟翼位置 4/Flap Position 4: 333 km/h (180 keas)
- 襟翼位置 5/Flap Position 5: 333 km/h (180 keas)
- 全襟翼位置/ Flap Position Full: 306 km/h (165 keas)

最大起落架操作速度(V_{LO})/Maximum landing gear operating speed (V_{LO}):

- 收起/ Retraction: 463 km/h (235 keas*)
- 放下/ Extension: 491 km/h (265 keas*)

* keas 直到 6,096m/ keas up to 6,096 m

最大放起落架速度(V_{LE})/Maximum landing gear extended speed (V_{LE}): 491 km/h (265 keas)

	轮胎地面最大速度 Maximum tire ground speed:	362 km/h (225 mph)

重量重心/CG RANGE

(起落架放下 landing gear extended)

50,790 kg	17,058 mm 到/to 17,849 mm (9.5 到/to 31% MAC)
48,790 kg	16,966 mm 到/to 17,849 mm (7% 到/to 31% MAC)
38,000 kg	16,966 mm 到/to 17,849 mm (7% 到/to 31% MAC)
31,800 kg	16,966 mm 到/to 17 724 mm (7% 到/to 27.6% MAC)
30,600 kg	17,702 mm (27% MAC)
29,500 kg	17,385 mm (18.4% MAC)

(flight limit extension)

50,790 kg	16,966 mm 到/to 17,849 mm (7.5 到/to 31% MAC)
48,790 kg	16,892 mm 到/to 17,905 mm (5% 到 to 32.5% MAC)
38,000 kg	16,892 mm 到/to 17,905 mm (5% 到 to 32.5% MAC)
31,800 kg	16,892 to 17,776 mm (5% 到/to 29% MAC)
30,600 kg	17,757 mm (28.5% MAC)

各给定点之间直线变化。/Straight-line variation between the points given.

因起落架收起导致的弯矩/Moment due to landing gear retraction:

- - 418,500 kg x mm.

(随着收起飞机重量重心向前运动。/The aircraft CG is moved forward with the retraction.)

受各点限制的范围：起飞时不允许 30,100kg(22% MAC),30,600kg (27% MAC), 38,000kg (31% MAC)和 43,400kg (31% MAC)。/The area limited by the points: 30,100 kg (22% MAC), 30,600 kg (27% MAC), 38,000 kg (31% MAC) and 43,400 kg (31% MAC) is not allowed for takeoff.

最大重量/MAXIMUM WEIGHT

停机坪/Ramp:	50,590 kg
起飞/Takeoff:	50,790 kg
着陆/Landing:	45,000 kg
零燃油/Zero Fuel:	42,500 kg

最大载客数/MAXIMUM PASSENGERS

118

最大行李重量/MAXIMUM BAGGAGE

货舱/Cargo Compartment:	最大载荷/Maximum Load (kg):
• 前/Forward	1,900
• 后/Aft	1,800

燃油油量/FUEL CAPACITY

最大可用燃油：16,152.6 公升(在+17,191 mm 处两个 8,076.3 公升的油箱) /Maximum usable fuel:16,152.6 liters (two tanks of 8,076.3 liters at +16,378 mm).

不可用燃油量：113.4 公升（每个燃油箱 56.7 公升，公斤与公升之比为 0.811）/Unusable fuel: 113.4 liters (56.7 liters at 0.811 kg/liter in each tank).

合格的系列号/SERIAL NUMBERS ELIGIBLE

190-00005， 190-00029 及其后续者/190-00005, 190-00029 and subsequent.

VI –ERJ 190-200 IGW 型飞机（运输类），ANAC 于 2006 年 6 月 30 日批准，CAAC 于 2008 年 5 月 12 日认可。

Model ERJ 190-200 IGW (Transport Category), approved by ANAC on 30 June 2006, validated by CAAC on 12 May 2008.

发动机/ENGINE	两台通用电气公司（GE）CF34-10E5，CF34-10E5A1，CF34-10E6，CF34-10E6A1，CF34-10E7 型发动机。见注释 8。/Two General Electric Engines (GE) model CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7.See Note 8.
辅助动力装置/APU	Hamilton Sundstrand APS 2300 型/Hamilton Sundstrand model APS 2300.
燃油/FUEL	巴西规范 ANP No. 1/2003 – QAV1; 美国 ASTM 规范 D-1655 JET A or JET A1; 美国军用规范 MIL-T-83133A JP-8; 中国 3 号喷气燃油（GB6537-94）
辅助动力装置限制/APU LIMITS	每分钟最大转速/Maximum RPM: 108% 最大发动机燃气温度/Maximum EGT: 1,032°C (起动/Start) 717°C (连续工作/Running) 其它限制见 Hamilton Sundstrand 文件 ESR 1235。 Other limitations as stated in Hamilton Sundstrand Document No ESR 1235.
滑油/OIL	发动机，辅助动力装置（APU）和组合驱动发电装置（IDG）滑油规范：MIL-PRF-7808 或 MIL-PRF-23699。/Engine, APU and IDG: MIL-PRF-7808 or MIL-PRF-23699.
空速限制/AIRSPEED LIMITS	最大运行限制速度(V_{MO})/Maximum operating limit speed (V_{MO}): • 0 m 到/to 2,438 m (*): 556 km/h (300 keas) • 3 ,048 m 到/to 8,805 m (*): 593 km/h (320 keas) • 8 ,805 m 到/to 12,497 m: 0.82 马赫/0.82 Mach (*) 从 2,438 m 到 3,048 m 线性变化。/Linear variation from 2,438 m to 3,048 m. 机动速度/Maneuvering speed (V_A): • 0 m (*): 469 km/h (253 keas) • 7 ,800 m (*): 515 km/h (278 keas) • 9 ,920 m (*): 517 km/h (279 keas) • 9 ,920 m 到/to 12,497 m: 0.82 马赫/0.82 Mach (*) 在 0m,7,800m 和 9,962m 之间变化。/Linear variation between 0, 7,800 m and 9 962 m. 最大襟翼放下速度(V_{FE})/Maximum flap extended speed (V_{FE}): • 襟翼位置 1/Flap Position 1: 426 km/h (230 keas) • 襟翼位置 2/Flap Position 2: 398 km/h (215 keas) • 襟翼位置 3/Flap Position 3: 370 km/h (200 keas)

	• 襟翼位置 4/Flap Position 4:	333 km/h (180 keas)
	• 襟翼位置 5/Flap Position 5:	333 km/h (180 keas)
	• 全襟翼位置/ Flap Position Full:	306 km/h (165 keas)
	最大起落架操作速度(V_{LO})/Maximum landing gear operating speed (V_{LO})	
	• 收起/ Retraction:	463 km/h (235 keas*)
	• 放下/ Extension:	491 km/h (265 keas*)
		* keas 直到 6,096 m/keas up to 6,096 m
	最大放起落架速度(V_{LE})/Maximum landing gear extended speed (V_{LE}):	491 km/h (265 keas)
	Maximum tire ground speed:	362 km/h (225 mph)

重量重心/CG RANGE (起落架放下/landing gear extended)	52,290 kg	17,124 mm 到/to 17,849 mm (11.3 到/to 31% MAC)
	48,790 kg	16,966 mm 到/to 17,849 mm (7% 到/to 31% MAC)
	38,000 kg	16,966 mm 到/to 17,849 mm (7% 到/to 31% MAC)
	31,800 kg	16,966 mm 到/to 17,724 mm (7% to 27.6% MAC)
	30,600 kg	17,702 mm (27% MAC)
	29,500 kg	17,385 mm (18.4% MAC)
(飞行限制范围/flight limit extension)	52,290 kg	17,050 mm 到/to 17,849 mm (7.5 到/to 31% MAC)
	48,790 kg	16,892 mm 到/to 17,905 mm (5% 到/to 32.5% MAC)
	38,000 kg	16,892 mm 到/to 17,905 mm (5% 到/to 32.5% MAC)
	31,800 kg	16,892 mm 到/to 17,776 mm (5% 到/to 29% MAC)
	30,600 kg	17,757 mm (28.5% MAC)

各给定点之间直线变化。/Straight-line variation between the points given.

因起落架收起导致的弯矩/Moment due to landing gear retraction:

- - 418,500 kg x mm.

(随着收起飞机重量重心向前运动。/The aircraft CG is moved forward with the retraction.)

受各点限制的范围：起飞时不允许 30,100kg(22% MAC),30,600kg (27% MAC), 38,000kg (31% MAC)和 43,400kg (31% MAC)。/The area limited by the points: 30,100 kg (22% MAC), 30,600 kg (27% MAC), 38,000 kg (31% MAC) and 43,400 kg (31% MAC) is not allowed for takeoff.

最大重量/MAXIMUM WEIGHT	停机坪/Ramp:	52,450 kg
	起飞/Takeoff:	52,290 kg
	着陆/Landing:	45,800 kg
	零燃油/Zero Fuel:	42,600 kg

最大载客数/MAXIMUM PASSENGERS 128

最大行李重量/MAXIMUM BAGGAGE	货舱/Cargo Compartment:	最大载荷/Maximum Load (kg):
	• 前/FORWARD	1,900
	• 后/AFT	1,800

燃油油量/FUEL CAPACITY

最大可用燃油：16,152.6 公升(在+17,191 mm 处两个 8,076.3 公升的油箱) /Maximum usable fuel:16,152.6 liters (two tanks of 8,076.3 liters at +16,378 mm).
不可用燃油量：113.4 公升（每个燃油箱 56.7 公升，公斤与公升之比为 0.811）/Unusable fuel: 113.4 liters (56.7 liters at 0.811 kg/liter in each tank).

合格的系列号/SERIAL NUMBERS ELIGIBLE

190-00005,190-00029 及其后续者/190-00005, 190-00029 and subsequent.

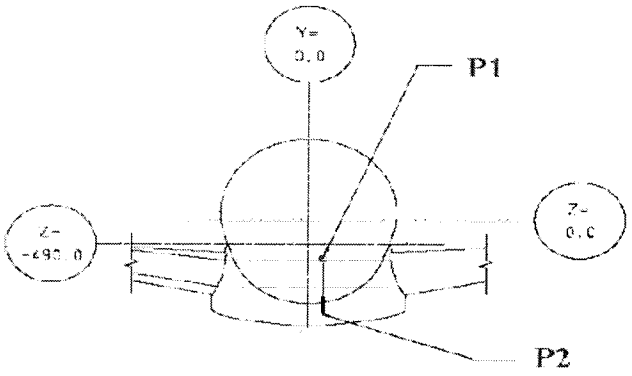
与所有 ERJ 190-200 型别有关的数据/
DATA PERTINENT TO ALL MODELS 190-200

数据/DATUM

到机身中线的垂直平面位于机翼根部前长桁前 15,256 mm 处。该长桁位于机翼顶撑点前 414 mm 处。/A perpendicular plane to the fuselage centerline, located at 15,256 mm ahead of the wing stub front spar. This spar is located 414 mm ahead of the wing jack point.

水平测量/LEVELING MEANS

P1 到 P2 的垂直线位于左侧起落架舱内部，如下图所示/Plumb line between the points P1 to P2 located inside the landing gear compartment on the left side, as illustrated below.
下表给出的是水平测量机身坐标点。/The table in following figure gives the leveling of fuselage coordinate points.



LEVELING OF FUSLG COORDINATE POINTS			
POINT	X	Y	Z
P1	18768.00	-250.00	-774.87
P2	18768.00	-250.00	-1683.47

平均气动弦/MEAN AERODYNAMIC CHORD

长度/Length: 3,682 mm.
平均气动弦前缘/Leading edge of mean aerodynamic chord:
X: 16 708 mm
Y: –5 644 mm
Z: –663 mm

合格审定基础/CERTIFICATION BASIS

与 FAR 25 相当的 RBHA 25 (运输类飞机适航要求),包括下列修正案/RBHA 25(Airworthiness Requirements - Transport Category Aircraft),corresponding to FAR 25, including amendments:
25-1 到 25-101 修正案加上下列修正案/25-1 through 25-101, plus the following amendments:

- 修正案 25-102，25.981(c)段除外/Amendment 25-102, except

paragraph 25.981(c);
- 修正案 25-103（完整的）/Amendment 25-103, integral;
- 修正案 25-104（完整的）/Amendment 25-104, integral;
- 修正案 25-105（完整的）/Amendment 25-105, integral;
- 修正案 25-107，25.735(h)段除外/Amendment 25-107, except paragraph 25.735(h);
- 修正案 25-108（完整的）/Amendment 25-108, integral;
- 修正案 25-109（完整的）/Amendment 25-109, integral;
- 修正案 25-110（完整的）/Amendment 25-110, integral;
- 修正案 25-112（完整的）/Amendment 25-112, integral;
- 修正案 25-113（完整的）/Amendment 25-113, integral;
- 修正案 25-114（完整的）/Amendment 25-114, integral;和/and
- 修正案 25-117（完整的）/Amendment 25-117, integral.

专用条件/Special Conditions:
- FCAR HES-01：突然发动机停车的发动机扭矩载荷(RBHA 21.16; RBHA/FAR 25.361)/Engine torque loads for sudden engine stoppage (RBHA 21.16; RBHA/FAR 25.361);
- FCAR HES-06：系统和结构的相互作用(RBHA 21.16;RBHA/FAR 25.671 和 25.1309)/Interaction of systems and structures (RBHA 21.16; RBHA/FAR 25.671 and 25.1309);
- FCAR HSI-01：高强度辐射场防护(RBHA 21.16,RBHA/FAR 25.1309, 25.1333,25.1431 和 25.1529)/High intensity radiated fields (HIRF) protection (RBHA 21.16, RBHA/FAR 25.1309, 25.1333, 25.1431 and 25.1529);
- FCAR HSI-02：非正常电源下的运行(RBHA 21.16,RBHA/FAR 25.1165(b),25.1309,25.1333(b) 和 25.1351)/Operation without normal electrical power (RBHA 21.16, RBHA/FAR 25.1165(b), 25.1309, 25.1333(b) and 25.1351);
- FCAR HDE-02：电子飞行控制系统-操纵面位置提示(RBHA 21.16, RBHA/FAR 21.16,25.143,25.671 和 25.672)/Electronic flight control system: control surface position awareness (RBHA 21.16, RBHA/FAR 21.16, 25.143, 25.671 and 25.672);和/and
- FCAR HDE-17：复飞期间对 ATTCS 性能的信任(RBHA 21.16,RBHA25.117,25.119(a),25.121(d),25.904,25.1309 和附件 I)/Performance credit for ATTCS during go-around (RBHA 21.16, RBHA 25.117, 25.119(a), 25.121(d), 25.904, 25.1309 and Appendix I).

等效安全判定/Equivalent Levels of Safety Findings:
- FCAR HES-13：检查机动载荷(RBHA 21.21(b)(1);RBHA/FAR 25.331(c)(2))/Checked maneuver loads (RBHA 21.21(b)(1); RBHA/FAR 25.331(c)(2));
- FCAR HES-19：燃油箱适坠性(RBHA 21.21(b)(1);RBHA/FAR 25.721 和 25.963(d))/Fuel tank crashworthiness (RBHA 21.21(b)(1); RBHA/FAR 25.721 and 25.963(d));
- FCAR HES-20：较小坠毁的判据(RBHA 21.21(b)(1);RBHA/FAR 25.721 和 25.963(d))/Minor crash criteria (RBHA 21.21(b)(1); RBHA/FAR 25.721 and 25.963(d));

- FCAR HES-36：应急出口位置标识(RBHA 21.21(b)(1); RBHA/FAR 25.811(d)(3))/Emergency exit locator signs (RBHA 21.21(b)(1); RBHA/FAR 25.811(d)(3)).
- FCAR HSI-15：设备，系统及其安装(RBHA 21.21(b)(1); RBHA/FAR 25.1309)/Equipment, systems and installations (RBHA 21.21(b)(1); RBHA/FAR 25.1309);
- FCAR HSI-27：航行灯的等效安全判定(RBHA 21.21(b)(1); RBHA/FAR 25.1389(b),25.1391,25.1393 和 25.1395)/Equivalent level of safety finding for position lights (RBHA 21.21(b)(1); RBHA/FAR 25.1389(b), 25.1391, 25.1393 & 25.1395);
- FCAR HSI-38：座舱通风-湿度要求(RBHA 21.21(b)(1), RBHA/FAR 25.831(g))/Cabin ventilation – humidity requirement (RBHA 21.21(b)(1), RBHA/FAR 25.831(g));
- FCAR HDE-16：对减小推力起飞期间使用自动功率储备性能的信任(RBHA 21.21(b)(1);RBHA/FAR 25.904,25.149 和附件 I)/Performance credit for use of automatic power reserve (APR) during reduced thrust takeoffs (RBHA 21.21(b)(1); RBHA/FAR 25.904, 25.149 and Appendix I);
- FCAR HPR-06：飞行关键反推(RBHA 21.21(b)(1);RBHA/FAR 25.933(a)(1)(ii)和 25.1309(b)(1)/Flight critical thrust reverse (RBHA 21.21(b)(1); RBHA/FAR 25.933(a)(1)(ii) & 25.1309(b)(1);
- FCAR HPR-14：仅有数字显示的涡轮发动机高-中压力转子速度(N2) (RBHA 21.21(b)(1);RBHA/FAR 25.901, 25.1305, 25.1309, 25.1321 和 25.1549)/Digital only display of turbine engine high/intermediate pressure rotor speed (N2) (RBHA 21.21(b)(1); RBHA/FAR 25.901, 25.1305, 25.1309, 25.1321 and 25.1549);
- FCAR HPR-17：采纳辅助动力装置协调要求(RBHA 21.21(b)(1); RBHA/FAR 25 Subparts E,F 和 G)/Adoption of APU harmonized requirements (RBHA 21.21(b)(1); RBHA/FAR 25 Subparts E, F and G); 和/and
- FCAR HPR-23：缺少 ATTCS 系统接通-断开开关(RBHA 21.21(b)(1); RBHA/FAR 25.117, 25.119(a), 25.121(d), 25.904, 25.1301, 25.1309, 附件 I)/Lack of on/off switch for ATTCS system (RBHA 21.21(b)(1); RBHA/FAR 25.117, 25.119(a), 25.121(d), 25.904, 25.1301, 25.1309, Appendix I).

豁免/Exemptions:

- 非包容发动机爆裂转子击中增压舱/Uncontained engine rotor burst hitting pressurized cabin [RBHA/FAR 25.841(a)(2)(i) and (ii)] –经有效日期为 2005 年 6 月 28 日的 DAC（ANAC）595/DGAC 号布告同意/Granted through Ordinance DAC (ANAC) No. 595/DGAC, dated 28 June 2005; 和/and
- 不可控高发动机推力/Uncontrollable high engine thrust [RBHA/FAR 25.901(c)] -经有效日期为 2005 年 6 月 16 日的 DAC（ANAC）548/DGAC 号布告同意/Granted through Ordinance DAC (ANAC) No. 548/DGAC, dated 16 June 2005.

噪声标准/Noise Standards:

- RBHA 36 部（型号合格审定的噪声标准），与 ICAO 的附件 16 第 1

卷第 3 章（第 3 版）相当，并且包括在 ANAC 进行 ERJ-190 合格审定日期有效的所有修正案/RBHA 36 (Noise Standard - Type Certification), corresponding to ICAO Annex 16, Volume I Chapter 3 (third edition), and including all amendments effective on the date the ERJ-190 certification by the ANAC.

燃油排泄和排气派出物要求/Fuel venting and exhaust emission requirements:

- RBHA 34 部（型号合格审定的涡轮发动机飞机燃油排泄和排气派出物要求），与 FAR 34 相当，并包括在 ANAC 进行 ERJ-190 合格审定日期有效的修正案/RBHA 34 (Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes - Type Certification), corresponding to the FAR 34 and including the amendment effective on the date the ERJ-190 certification by the ANAC.

按照下列要求进行选装设计/Optional design requirements complied with:

- RBHA/FAR 25.1403：机翼探冰灯/Wing icing detection lights;
- RBHA/FAR 25.1411 和/and 25.1415：水上迫降合格审定要求的安全设备/Safety equipment required for ditching certification;
- RBHA/FAR 25.1419：防冰/Ice protection; 和/and
- RBHA/FAR 25.1421：扩音器/Megaphones.

所有 ERJ 190-200 型别的合格审定申请日期是 2001 年 12 月 31 日/ Application date for type certification of all models of the ERJ 190-200: 31 December 2001.

生产基础/PRODUCTION BASIS

ERJ 190-200 STD,LR 和 IGW 各型别的生产批文为 2006 年 11 月 8 日生效的 CHE E-7203-01/Models ERJ 190-200 STD, LR and IGW: Production approved under CHE E-7203-01, on 08 November 2006.

设备/EQUIPAMENTS

相关适航规章（见合格审定基础）要求的基本设备必须安装在飞机上。批准的设备列于 Embraer 技术报告 190-200TDSD。ANAC 批准的编号为 AFM-1868 的飞机飞行手册必须装在飞机上。/The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the airplane. The approved equipment is listed in the Embraer Technical Report 190-200TDSD.The ANAC approved airplane flight manual P/N AFM-1868 must be on board.

与所有 ERJ 190 型别相关的数据
DATA PERTINENT TO ALL MODELS ERJ 190

发动机限制/ENGINE LIMITS

CF34-10E6, CF34-10E5, CF34-10E5A1,

	CF34-10E6A1, CF34-10E7	
运行条件/Operating conditions:		
• 正常起飞/Normal takeoff (1):		
CF34-10E6 的最大 ITT/ITT Max CF34-10E6	938°C	
CF34-10E6A1 的最大 ITT/ITT Max CF34-10E6A1	983°C	
CF34-10E5 的最大 ITT/ITT Max CF34-10E5	939°C	
CF34-10E5A1 的最大 ITT/ITT Max CF34-10E5A1	983°C	
CF34-10E7 的最大 ITT/ITT Max CF34-10E7	943°C	
最大 N1/N1 Max (% 6325)	100%	
最大 N2/N2 Max (% 18018)	100%	
• 最大起飞/Maximum takeoff (ATTCS) (1) (4):		
最大 ITT/ITT Max	983°C	
最大 N1/N1 Max (% 6325)	100%	
最大 N2/N2 Max (% 18018)	100%	
• 最大连续/Maximum continuous:		
最大 ITT/ITT Max	960° C	
最大 N1/N1 Max (% 6325)	100%	
最大 N2/N2 Max (% 18018)	100%	
• 地面起动/Ground Start:		
最大 ITTITT Max	740° C	
• 空中起动/In flight start:		
最大 ITT/ITT Maxi	875° C	
滑油温度/Oil temperature:		
• 最大连续/Maximum continuous:	155° C	
• 起动最低/Minimum for starting:	- 40° C	
滑油压力/Oil pressure:		
• 最大瞬态/Maximum transient (3) (冷起动后/after cold start):	5 psid (最小/Min) (2)	250 psid (最大/Max)
最小压力/Minimum pressure:		
• 起飞功率/Takeoff power	70 psid	
• 静定慢车/Steady state idle	25 psid	

注/Notes:

(1)最大连续以上的功率水平被限制到 5 分钟周期。一发动机不工作运行期间，5 分钟 ATTCS 限制延长至 10 分钟。/Thrust levels above maximum continuous are limited to 5-minute periods. The 5-minute ATTCS limit is extended to 10 minutes for operations with one engine inoperative.

(2)对低于-20 ºC 的滑油温度，发动机起动后第一个 2 分钟期间的最低压力为 5 psid。稳定慢车 2 分钟后，或如果在稳定慢车下提高功率发动机，滑油的最低压力是 25 psid。适用于安装 5.02 版及其后续版本 FEDEC 的飞机。/For oil temperature less than –20ºC, the minimum pressure is 5 psid for the first 2 minutes after engine start. After 2 minutes on steady state idle or if power engine were elevated under steady state idle, the minimum pressure of the oil is 25 psid. Applicable to aircrafts with FADEC version 5.02 or installed later.
(3)寒冷气象运行期间，由于高滑油粘性可能发生滑油压力峰值到达满刻度的现象。发动机必须保持在慢车，直到滑油压力返回到正常工作范围。/During cold weather operations, oil pressure peaks to full scale may occur due to high oil viscosity. The engine must remain at idle until oil pressure returns to normal operating range

(4) ATTCS 不适用于 CF34-10E5A1 和 CF34-10E6A1 发动机。/ATTCS is not applicable to CF34-10E5A1,CF34-10E6A1 engines.

最小机组/MINIMUM CREW

2 人/Two (2): 正驾驶和副驾驶/pilot and copilot.

滑油油量/OIL CAPACITY
润滑/LUBRIFICANTE

每台发动机/Per engine:

- 总油量(公升/美国夸脱): 14,7 (15,6)/
  Total （liters/U.S quarts): 14,7 (15,6)
- 可用油量(公升/美国夸脱): 13,5 (14,4)/
  Usable (liters/U.S quarts): 13,5 (14,4)

滑油油箱容量/CAPACITY HIDRAULIC OIL TANK

每个系统:系统 1=37.0 公升/系统 2=50.6 公升/系统 3=13.5 公升/
Per system: Sis1 = 37.0 liters / Sis2 = 50.6 liters / Sis3 = 13.5 liters.
总容量(3 个系统):101.10 公升/Total (tree systems): 101.10 liters.

最大高度/MAXIMUM ALTITUDES

运行/Operating:	12,497 m (41,000 ft)
起飞和着陆/Takeoff and landing:	3,048 m (10,000 ft)

运行温度/TEMPERATURE OPERATING
限制/LIMITS

高度/Altitude:	最大 /Maximum:	最低/Minimum:
• 海平面/Sea Level:	+ 52°C	-54°C -40°C (地面运行 /ground operation)
• 7 620 m (25 000 ft):	+ 0.0°C	-54°C
• 11 000 m (36 089 ft):	-21.5°C	-65°C
• 12 497 m (41 000 ft):	-21.5°C	-65°C

燃油箱温度限制/LIMIT OF FUEL TANK TEMPERATURE

-40ºC (-40 ºF) 最低/minimum

操纵面运动/CONTROL SURFACE MOVEMENTS
(公差见飞机维修手册/See AMM for tolerances)

方向舵/Rudder (1):	31.5º 左/left	31.5º 右/right
水平安定面/Horizontal stabilizer:	11.0º 后缘向上/TE up	4.0º 后缘向下/TE down
副翼/Aileron:	25º.0 后缘向上/TE up	15.0º 后缘向下/TE down

升降舵/Elevator(2):	25.0° 后缘向上/TE up	18.0° 后缘向下/TE down
地面扰流板/Ground spoilers:	60°	
外侧扰流板/Outboard spoilers:	40°	

(1)对零空速(在地面),最大偏转根据空速变化./For zero airspeed, on the ground; maximum deflections vary according to airspeed.

(2)对零空速,最大偏转根据空速变化./For zero airspeed; maximum deflections vary according to airspeed.

襟翼和缝翼/Flapes and Slats:

襟翼调定位置/Flap setting position	内侧襟翼/Inboard flap(main / aft)	外侧襟翼/Outboard flap	缝翼位置/Slat position	
			1	2, 3 & 4
0	0.0° / 0.0°	0°	0.0°	0.0°
1	7.1° / 15.4°	7.0°	12.0°	15.0°
2	10.1° / 16.6°	10.1°	12.0°	15.0°
3	20.2° / 19.2°	20.0°	12.0°	15.0°
4	20.2° / 19.2°	20.0°	20.0°	25.0°
5	20.2° / 19.2°	20.0°	20.0°	25.0°
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

清单，2005 年 6 月 29 日生效的或后来可接受的版本。/Annex I to ANAC FCAR HT-03 (List of all OTP/TSO/JTSO/etc. articles installed in the ERJ 190-100 ( ) aircraft), dated 29 June 2005 or later acceptable revision; 和/and

- 为每架 ERJ 190-100 ( )系列号飞机出版的飞机内设构型报告。/Aircraft Interior Configuration Report, issued for each ERJ 190-100 ( ) serial number airplane.
- 190-200TDSD. “型号设计标准文件”，有效日期为 2005 年 8 月 26 日的 2 版，或后来可接受的版本。/“Type Design Standard Document”, revision /2 dated 26 August 2005 or later acceptable revision;
- 190EBD200 “工程基本数据”，有效日期为 2005 年 7 月 1 日的 G 版，或后来可接受的版本。/“Engineering Basic Data”, revision G dated 1 July 2005 or later acceptable revision;
- FCAR HT-03 的附件 I（ERJ 190-100 飞机上安装的所有 OTP/TSO/JTSO/等项目），有效日期为 2005 年 6 月 29 日版本或后来可接受的版本。Annex I to ANAC FCAR HT-03 (“List of all OTP/TSO/JTSO/etc. articles installed in the ERJ 190-100 ( ) aircraft”), dated 29 June 2005 or later acceptable revision; 和/and
- 为每架 ERJ 190-200 ( )系列号飞机出版的“飞机内设构型报告”。/“Aircraft Interior Configuration Report”, issued for each ERJ 190-200 ( ) serial number airplane.

注释/NOTE 7 不允许零件号为ECP 2041M42P02，2041M42P06,2041M42P08和2041M42P09的发动机控制插头安装在任何ERJ 190-100和ERJ 190-200的CF34-10E发动机构型。/ Engine Control Plugs part numbers ECP 2041M42P02, 2041M42P06, 2041M42P08 and 2041M42P09 are not permitted on any ERJ 190-100 and ERJ 190-200 CF34-10E engines configuration.

注释/NOTE 8 发动机零部件清单所列出的CF34-10E5, CF34-10E5A1, CF34-10E6, CF3410E6A1和CF34-10E7等发动机名称必须含有后缀Gxx，以定义具体发动机构型。对于ERJ 190-100和ERJ 190-200型别飞机，下列发动机名称被批准用于运行：CF34-10E6G03,CF34-

注释/NOTE 9 对于ERJ 190-100 IGW飞机，按Pós-Mod 服务通告190-00-0008的最大起飞重量将是46,000 kg，按Pós-Mod服务通告190-00-0009的最大起飞重量将是51,800kg。/For E RJ 190-100 IGW model, Pós-Mod Service Bulletin 190-00-0008, Maximum Takeoff Weight will be 46 000 kg and Pós-Mod Service Bulletin 190-00-0009, Maximum Takeoff Weight will be 51 800 kg.