TYPE-CERTIFICATE
DATA SHEET

No. EASA.IM.A.071

for

EMBRAER ERJ-190

Type Certificate Holder:

Embraer S.A.

Av. Brig. Faria Lima. 2170
12227-901 São Jose dos Campos SP
Brazil

For Models: ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-100 ECJ, ERJ 190-100 SR, ERJ 190-200 STD, ERJ 190-200 LR, ERJ 190-200 IGW, ERJ 190-300, ERJ 190-400
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SECTION: ADMINISTRATIVE
SECTION 1: GENERAL (ALL VARIANTS)

1. Data Sheet No: A.071
2. Airworthiness Category: Large Aeroplanes
3. Performance Category: A
4. Certifying Authority: Agência Nacional De Aviação Civil-ANAC
   Gerência Geral de Certificação de Produtos Aeronáuticos
   Rua Dr. Orlando Feirabend Filho, 230 - Centro Empresarial Aquarius
   Torre B Andares 14 a 18, Parque Residencial Aquarius,
   12.246-190 - São José dos Campos - SP
5. Type Certificate Holder: Embraer S.A.
   Av. Brig. Faria Lima. 2170
   12227-901 São Jose dos Campos SP
   Brazil
6. ETOPS

   The Type Design, system reliability and performance of the ERJ 190-100ECJ model
   (commercially known as Lineage 1000) was found capable for Extended Range
   Operations iaw AMC 20-6 as documented in CRI G-2, when configured, maintained and
   operated in accordance with the current revision of the ETOPS Configuration,
   Maintenance and Procedures (CMP) document, CMP-2926.
   This finding does not constitute an approval to conduct Extended Range Operations
   (operational approval must be obtained from the responsible Authority).

SECTION 2 (EMBRAER ERJ 190-100 VARIANT)

I. General

1. Aeroplane: Embraer ERJ 190-100
   (see Note 2)
2. EASA Validation Application Date: 30 March 2003
   (Reference date for EASA validation)
3. EASA Validation Date: 30 June 2006
   (JAA recommendation)

II. Certification Basis

1. Reference Date for ANAC Certification: 30 May 2001
2. ANAC Certification Date: 30 August 2005
3. **ANAC Certification Basis:**


   Note: The ERJ 190-100 ECJ (Commercially known as Lineage 1000) auxiliary fuel tanks comply with the requirement 25.981(c) of Amendment FAR 25-102.

4. **EASA Airworthiness Requirements:**

   4.1 **Applicable JAR Requirements at the Reference Date:**

   - JAR-25 Change 15 (Effective 01 October 2000)
   - CS-AWO

   Note: The ERJ 190-100 ECJ auxiliary fuel tanks comply with the requirement 25.981 of Amendment FAR 25-102.

   4.2 **Reversions:** None Identified

5. **EASA Special Conditions:**

   The following Special Conditions have been applied.

   - JAA/170/SC/CRI 170/B-12 Angle of Attack Limiting Function
   - JAA/170/SC/CRI 170/B-15 Electronic Flight Control System:
     - Control Surface Position Awareness
   - JAA/190/SC/CRI 190/E-16 Engine and APU Intakes Icing
   - JAA/170/SC/CRI 170/F-14 Air Data System (Smart Probes)
   - JAA/170/SC/CRI 170/F-16 IRS: Align in Motion
   - EASA/170/SC/CRI 170/F32 Head Up Guidance System
   - JAA/170/SC/CRI 170/D-02 Towbarless Towing (Ref: PNPA 25D-275)
   - JAA/170/SC/CRI 170/C-03 Interaction of Systems and Structure (NPA 25C-199)
   - JAA/170/SC/CRI 170/C-15 Structural/Control Jam Conditions (JAR 25.671(c) (3)
   - JAA/170/SC/CRI 170/C-17 Static Strength Criteria for Engine Failure Loads
   - JAA/170/SC/CRI 170/E-08 Engine Sustained Imbalance
   - JAA/170/SC/CRI 170/E-10 Uncontrolled Thrust Increase
   - JAA/170/SC/CRI 190/E-18 Reversing System Requirements
   - JAA/170/SC/CRI 170/F-01 Protection from the effects of HIRF
   - JAA Interim Policy INT/POL/25/2 Issue 2
   - JAA/170/SC/CRI 170/F-15 On Board Databases JAR 25.1301, 25.1309,
     - TGL N°9/10, ED-12B/DO-178B, ED-76/DO-200A
   - EASA/190/SC/CRI 190/D-30 In-Flight Accessible Class C Baggage Compartment
   - EASA/190/SC/CRI 190/D-37 Isolated Compartments
6. **EASA Deviations:**

- EASA/190/Deviation/CRI 190/D-29  Emergency Exit Marking
- EASA/190/Deviation/CRI 190/D-31  Installation of Door between passenger compartments
- EASA/190/Deviation/CRI 190/D-32  Side Facing Divan
- EASA/190/Deviation/CRI 190/D-33  Firm Handhold

7. **EASA Equivalent Safety Findings:**

The following Equivalent Safety Findings have been granted:

- **JAA/170/ESF/CRI B-17**  Performance information for take-off on contaminated Runways
  Equivalent Safety with JAR 25x1591 and AMJ 25x1591 (Issue 8 dated 19 October 2009): JAR 25x1591 and AMJ 25x1591 superseded by CS-25.1591 and AMC 25.1591 at Amrd 2
- **JAA/170/ESF/CRI C-04**  Vibration Buffet and Aeroelastic Stability
  Equivalent Safety with JAR 25.629 and NPA 25BCD-236
- **JAA/170/ESF/CRI C-21**  Fuel Tank Crashworthiness
  Equivalent Safety with JAR 25.963(d) and JAR 25.561
- **JAA/170/ESF/CRI D-05**  Hydraulic Systems
  Equivalent Safety with JAR 25.1435
- **JAA/170/ESF/CRI D-06**  Wheels and Brakes
  Equivalent Safety with JAR 25.731 and JAR 25.735
- **JAA/170/ESF/CRI D-07**  Fuselage Doors
  Equivalent Safety with JAR 25.783
- **JAA/170/ESF/CRI D-17**  Type and Number of Passenger Emergency Exits
- **JAA/170/ESF/CRI D-18**  Packs Off Take Off
  Equivalent Safety with JAR 25.831(a)
- **JAA/170/ESF/CRI D-19**  Reinforced Security Cockpit Door
- **JAA/170/ESF/CRI 190/D-23**  Thermal Acoustic Linings (ESF)
  Equivalent Safety with JAR25.853(a)
- **JAA/170/ESF/CRI 190/D-27**  Tyre Speed Rating
  Equivalent Safety with JAR 25.733
- **JAA/170ESF/CRI 190/D-28**  Seat Mounted Items of Mass/ Cabin Surveillance Systems/Bulkhead Exit Signs
- **JAA/170/ESF/CRI 190/E-13**  Powerplant Installation Safety Assessments
  Equivalent Safety with JAR 25.901(c), 25.1309 (NPA 25E-337)
JAA/170/ES/CRI F-12 Equipment, Systems and Installation Requirements Equivalent Safety with JAR NPA 25F-281
JAA/170/ES/CRI F-26 Honeywell Primus EPIC Integrated Modular Avionics System (Compliance with requirements for individual circuit protection) Equivalent Safety with JAR 25.1357(e) and JAR 25.1309
JAA/170/ES/CRI 190/F-32 Position Light Intensities Equivalent Safety with JAR 25.139(b), 25.1391, 25.1393, and 25.1395
EASA/170/190/ESF/CRI F-47 Lavatory Oxygen System Restoration Equivalent Safety with JAR 25.1441 (c) and 25.1443 (c)
EASA/170/190/ESF/CRI F-50 New LED Position Lights System Overlap Exceedance Equivalent Safety with JAR 25.1389 (b) (3) and 25.1395
JAA/170/ES/CRI J-05 APU Installation Equivalent Safety with JAR 25 Subpart J
JAA/170/ES/CRI J-06 APU Instrument Markings Equivalent Safety with JAR 25J.1549

8. **EASA Environmental Standards:**


9. **EASA Operational Suitability Data**

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

**MMEL:** As per CRI A-MMEL, the applicable certification basis for the establishment of Operational Suitability Data (OSD) MMEL is: JAR MMEL/MEL Amendment 1, Section 1 with CS-MMEL Book 2 Initial issue as AMC/GM.

**FCD:** As per CRI A-FCD, the applicable certification basis for the establishment of Operational Suitability Data (OSD) Flight Crew is: CS-FCD, Initial Issue, dated 31 January 2014.

**CCD:** As per CRI A-CCD, the applicable certification basis for the establishment of Operational Suitability Data (OSD) Cabin Crew is: CS-CCD, Initial Issue, dated 31 January 2014.

III. **Technical Characteristics and Operational Limitations**

1. **Production Basis:** Manufactured under Type Production Certificate (ANAC COP E-7203-1)
2. **Design Standard:** Defined by Report 190-100TDSD_EASA “Type Design Standard Document” at Revision – Defined by 190-100TDSD_ECJ Revision A - Type Design Standard Document for model ECJ
3. **Description:** Low wing jet transport with a conventional tail unit
configuration, powered by two high bypass turbofan engines mounted on pylons beneath the wings.

The structure is conventional, with an aluminum-alloy fuselage, wing, tail-plane and fin; while ailerons, flaps, spoilers, elevator, and rudder are of composite material. The landing gear is retractable tricycle type, and twin wheeled, with carbon main landing gear wheel brakes.

4. **Dimensions:**

<table>
<thead>
<tr>
<th></th>
<th>Length</th>
<th>(118 ft 10 in)</th>
<th>Span</th>
<th>(94 ft 3 in)</th>
<th>Height</th>
<th>(34 ft 8 in)</th>
<th>Wing Area</th>
<th>(996 ft²)</th>
</tr>
</thead>
</table>

5. **Engines:**

Two General Electric CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7 Turbofan Engines (see Note 1). The engine applicable for the ERJ 190-100 ECJ is the CF34-10E7-B. The engines applicable for the ERJ 190-100 SR are the CF34-10E5A1 and CF34-10E7.

Limitations: See EASA Engine TCDS No. IM.E.021 or Airplane Flight Manual

6. **Auxiliary Power Unit:**

Pratt & Whitney Rzeszów S.A. APS2300

Limitations: Refer to the APU ETSO and DDP referenced therein

7. **Propellers:**

N/A

8. **Fuel:**

Refer to applicable approved manuals

9. **Oil:**

Refer to applicable approved manuals

10. **Airspeeds:**

See Airplane Flight Manual

11. **Maximum Operating Altitude:**

12, 497 m (41,000 ft) pressure altitude

12. **All Weather Capability:**

Cat II, CATIIIa Autoland without Rollout, Head-Up Guidance System with LVTO/CATIIIa/Rollout

13. **Maximum Certified Weights:**

<table>
<thead>
<tr>
<th>Phase</th>
<th>190-100STD</th>
<th>190-100 LR</th>
<th>190-100 IGW</th>
<th>190-100 ECJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi and Ramp</td>
<td>105706 lb</td>
<td>47950 kg</td>
<td>111239 lb</td>
<td>50460 kg</td>
</tr>
<tr>
<td>Take-off</td>
<td>105353 lb</td>
<td>47790 kg</td>
<td>110892 lb</td>
<td>50300 kg</td>
</tr>
<tr>
<td></td>
<td>96624 lb(2)</td>
<td>43740 kg(3)</td>
<td>105359 lb(1)</td>
<td>47790 kg(1)</td>
</tr>
<tr>
<td></td>
<td>101.412 lb(6)</td>
<td>46.000 kg(6)</td>
<td>110209 lb(3)</td>
<td>49990 kg(3)</td>
</tr>
<tr>
<td></td>
<td>99.207 lb(6)</td>
<td>45.000 kg(6)</td>
<td>99888 lb(4)</td>
<td>44900 kg(4)</td>
</tr>
<tr>
<td></td>
<td>98.325 lb(6)</td>
<td>44.600 kg(6)</td>
<td>101.412 lb(6)</td>
<td>46.000 kg(6)</td>
</tr>
<tr>
<td></td>
<td>97.002 lb(6)</td>
<td>44.000 kg(6)</td>
<td>99.207 lb(6)</td>
<td>45.000 kg(6)</td>
</tr>
<tr>
<td></td>
<td>111239 lb</td>
<td>50460 kg</td>
<td>114546 lb</td>
<td>51960 kg</td>
</tr>
<tr>
<td>Landing</td>
<td>105816 lb</td>
<td>43000 kg</td>
<td>43000 kg</td>
<td>44000 kg</td>
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<tr>
<td></td>
<td>94794 lb</td>
<td>43000 kg</td>
<td>96998 lb</td>
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<td>89944 lb</td>
<td>40800 kg</td>
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<td>Zero Fuel</td>
<td>89944 lb</td>
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<td>90164 lb</td>
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<tr>
<td></td>
<td>97.002 lb</td>
<td>44.000 kg</td>
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<td>44.000 kg</td>
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<tr>
<td>Phase</td>
<td>190-100 SR</td>
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<td>101 743 lb</td>
<td>46 150 kg</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>110 561 lb</td>
<td>50 150 kg</td>
<td></td>
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<tr>
<td></td>
<td>111 245 lb</td>
<td>50 460 kg</td>
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</tr>
<tr>
<td>Take-off</td>
<td>101 390 lb</td>
<td>45 990 kg</td>
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<td>110 209 lb</td>
<td>49 990 kg</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>110 892 lb</td>
<td>50 300 kg</td>
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</tr>
<tr>
<td>Landing</td>
<td>105816 lb</td>
<td>43 000 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero Fuel</td>
<td>89944 lb</td>
<td>40 800 kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) For airplanes Post-Mod. SB 190-00-0012 or equipped with an equivalent modification factory incorporated.
(2) For airplanes Post-Mod. SB 190-00-0024 or equipped with an equivalent modification factory incorporated.
(3) For airplanes Post-Mod. SB 190-00-0030 or equipped with an equivalent modification factory incorporated.
(4) For airplanes Post-Mod. SB 190-00-0032 or equipped with an equivalent modification factory incorporated.
(5) For airplanes Post-Mod. SB 190-00-0034 or equipped with an equivalent modification factory incorporated.
(6) For airplanes Post-Mod. SBs 190-00-0050 to 190-00-0065 or equipped with an equivalent modification factory incorporated.
(7) For airplanes Post-Mod. SBs 190LIN-00-0016 to 190LIN-00-0018 or equipped with an equivalent modification factory incorporated.
(8) For airplanes Post-Mod. SBs 190-00-0089 or equipped with an equivalent modification factory incorporated.
(9) For airplanes Post-Mod. SBs 190-00-0087 or equipped with an equivalent modification factory incorporated.

14. **Centre of Gravity:**

See Airplane Flight Manual

15. **Datum:**

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.

16. **Mean Aerodynamic Chord (MAC):**

3.682 m (12ft. 1 in.)

17. **Levelling Means:**

See Weight and Balance manual

18. **Minimum Flight Crew:**

Two (Pilot and Co-pilot) for all types of flight

19. **Maximum Passenger Capacity:**

114 Passengers

The ERJ 190-100 ECJ is limited to 19 Passengers (see Note 4)

The ERJ 190-100 SR is limited to 98 Passengers

20. **Exits all 190-100 models except 190-100 ECJ (Lineage 1000):**

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Size mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main Fwd LH</td>
<td>1 Type I</td>
</tr>
<tr>
<td>2</td>
<td>Main Aft LH</td>
<td>1 Type I</td>
</tr>
<tr>
<td>3</td>
<td>Overwing Emergency Doors (LH)</td>
<td>1 Type III</td>
</tr>
<tr>
<td>4</td>
<td>Overwing Emergency Doors (RH)</td>
<td>1 Type III</td>
</tr>
<tr>
<td>5</td>
<td>Service (Fwd, RH)</td>
<td>1 Type I</td>
</tr>
<tr>
<td>6</td>
<td>Service (Aft RH)</td>
<td>1 Type I</td>
</tr>
</tbody>
</table>

The **ERJ 190-100 ECJ** has the following exits available:

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Size mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main Fwd LH</td>
<td>1 Type I</td>
</tr>
<tr>
<td>2</td>
<td>Overwing Emergency Doors (RH)</td>
<td>1 Type III</td>
</tr>
</tbody>
</table>

The Overwing Emergency Doors (LH), the Service Doors (Fwd, RH) and (Aft RH) were locked and not operative. The Main Aft LH is used as Baggage Door. (see Note 4)
Additionally, for crew emergency evacuation purposes, the following exits are available on both sides:

<table>
<thead>
<tr>
<th>Exit Type</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cockpit side window (2)</td>
<td>483 mm x 508 mm</td>
</tr>
<tr>
<td>Flight Crew Emergency Exit</td>
<td></td>
</tr>
</tbody>
</table>

21. **Baggage/Cargo Compartment all 190-100 models except 190-100 ECJ:**

<table>
<thead>
<tr>
<th>Location</th>
<th>Class</th>
<th>Volume m³ (ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Fwd (Underfloor)</td>
<td>C</td>
<td>12.5 m³ (442 ft³)</td>
</tr>
<tr>
<td>Rear Aft (Underfloor)</td>
<td>C</td>
<td>10.1 m³ (358 ft³)</td>
</tr>
</tbody>
</table>

**Baggage/Cargo Compartment for the ERJ 190-100 ECJ (**) :**

<table>
<thead>
<tr>
<th>Location</th>
<th>Class</th>
<th>Max Volume m³ (ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Fwd (Underfloor)</td>
<td>C</td>
<td>3.42 m³ (120.77 ft³)</td>
</tr>
<tr>
<td>Rear Aft (main deck)</td>
<td>C</td>
<td>9.14 m³ (322.77 ft³)</td>
</tr>
</tbody>
</table>

(*) subject to Cabin completion – see Note 4

22. **Wheels and Tyres:**

- Nose Assy (Qty 2) Tyre/Wheel: 24x7.7 16PR / 24x7.7 R10*
- Main Assy (Qty 4) Tyre/Wheel: H41x16.0-20 22PR / H41x16.0 R20*
  
  Speed Rating: 225 mph
  
  * The radial tyre is a standard item for ERJ190-100ECJ and an optional item for the other ERJ190-100 models.

**IV. Operating and Servicing Instructions**

1. **Flight Manual:**

   Airplane Flight Manual, Document No. AFM 1913

2. **Mandatory Maintenance Instructions:**

   2.1 Aircraft Maintenance Manual (Customised to aircraft configuration)

   2.2 Maintenance Review Board Report Ref: MRB 1928, Revision 1 or subsequent JAA approved revision. For the ERJ 190-100 ECJ model the applicable document is the Maintenance Planning Guide (MPG) document 2928.

   2.3 Airworthiness Limitations and Certification Maintenance Requirements:

   MRB Report P/N 1928:
   
   Appendix A Part 1 (Certification Maintenance Requirements)
   Appendix A Part 2 (Airworthiness Limitations Inspections)
   Appendix A Part 3 (Fuel System Limitation Items - FSL)
   Appendix A Part 4 (Life Limits Items – LLI)
For the ERJ 190-100 ECJ model, the Appendix A (Part 1, 2, 3 and 4) of the Maintenance Planning Guide (MPG) document 2928 must be considered as reference for mandatory maintenance requirements mentioned above.

2.4 Structural Repair Manual SRM-1929 is applicable. For ERJ 190-100 ECJ the Structural Repair Manual SRM-2773 applies.

3. **Service Letters and Service Bulletins:** As published by Embraer and approved by ANAC.

4. **Required Equipment:** Required equipment is listed in Embraer Document Reference 190CCC009: Embraer ERJ 190 Build Standard for Airplanes to be delivered to European Countries.

V. **Operational Suitability Data (OSD)**

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.071 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List
   a. The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-MMEL and as documented in Embraer 170/175/190/195 EASA Master Minimum Equipment List MMEL-5814, Revision Original, December 2015, or later approved revisions.
   b. Required for entry into service by EU operator.

2. Flight Crew Data
   a. The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-FCD and as documented in EASA Operational Suitability Data (OSD) Flight Crew - ERJ 170/190 Report 170MSO092, Orig. Revision, dated 04 December 2015, or later approved revisions.
   b. Required for entry into service by EU operator.
   c. Pilot Type Rating: The licence endorsement for the ERJ 190-100 models aircraft is “EMB170”. The ERJ 190 and the ERJ 170 series aircraft are variants of the same type of aircraft.

3. Cabin Crew Data
   a. The Cabin Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-CCD and as documented in Embraer 170/175/190/195 Operational Suitability Data Report, Cabin Crew Qualifications - Revision 2, dated 12 June 2014, or later approved revisions.
   b. Required for entry into service by EU operator.
c. The Embraer 190/195 aircraft models are determined to be variants to the Embraer 170/175 aircraft models.

VI Notes

Note 1 - The CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1, CF34-10E7 and CF34-10E7-B engines designation, as presented in the Engine Parts List, must contain the suffix Gxx, which defines the specific engine configuration. For the ERJ 190-100 and ERJ 190-200 models, the following designations are approved for operation: CF34-10E6G03, CF34-10E6A1G03, CF34-10E5G03, CF34-10E5A1G03, CF34-10E6G05, CF34-10E6A1G05, CF34-10E5G05, CF34-10E5A1G05, CF34-10E7G03, CF34-10E7G05, CF34-10E6A1G07, CF34-10E5G07, CF34-10E5A1G07, CF34-10E7G07, CF34-10E7G03, CF34-10E7-BG05 and CF34-10E7-BG07.

The engine nameplate may display the model (example: CF34-10E6) and the Gxx suffix (example: G05) in separate fields. CF34-10E Block 2 engines are identified with the suffix “G07”

Note 2 - The models ERJ 190-100 are often referred to in Embraer marketing literature as “EMBRAER 190. The ERJ 190-100 IGW is referred to in Embraer marketing literature as “EMBRAER 190 AR”. The ERJ 190-100 ECJ model is frequently mentioned in Embraer marketing literature as “Lineage1000”.

These names are strictly marketing designations and are not part of the official models designation.

EASA Approval Dates:
30. June 2006:
ERJ 190-100 STD
ERJ 190-100 LR
ERJ 190-100 IGW

7. November 2007:
ERJ 190-100 ECJ

29. January 2010
ERJ 190-100 SR

Note 3 – The PRIMUS EPIC® Load 4.4 or subsequent approved loads have to be installed. For the ERJ 190-100 ECJ the PRIMUS EPIC® Load 21.4 or subsequent approved loads have to be installed.

Note 4 – The ERJ 190-100 ECJ is initially configured “Green”. The “Green Configuration” type design does not include passenger provisions. Carriage of persons in the cabin is permitted when an approved seating arrangement and related required passenger provisions are incorporated in accordance with Doc 190MSD006 “ERJ-100ECJ Completion Guidelines”. In relation to demonstrate compliance with Doc 190MSD006, a maximum basic operating weight & payload – for the purpose of fatigue evaluation - of 33.386kg needs to be respected. The EU Type Design requires incorporation of corrective actions iaw EMBRAER letter GCF-2073/2009 dtd. 30. Nov 2009 “corrective action plan”.

Commercial Operation under EASA jurisdiction:

a) “Green Configuration”: Compliance with EU OPS and JAR 26 was demonstrated.

b) Approved seating arrangement: Demonstration of compliance with EU OPS and JAR 26 is required. Aircraft with Cabin Doors iaw CRI 190/D-31 are not eligible for commercial operation under EASA rules except if adopted by a suitable approved modification, e.g., Embraer SB-190LIN-00-005.

Note 5 – The EU type design for ERJ 190-100 ECJ from CJ001 through CJ008 requires incorporation of corrective actions iaw EMBRAER letter GCF-0402/2010 dtd. 14. April 2010, when exported to an EASA member.
Note 6 – The thermal and acoustic insulation material that meets the flammability certification requirement CS 25.856 (b) has been approved for ERJ190-100 and ERJ190-200 models (except ERJ 190-100 ECJ) according to Design Change Approval (DCA) 0190-025-00147-2008/EASA and it was addressed with “Elect to comply” CRI D-24 “Thermal Acoustic Insulation Material.”
SECTION 3 (EMBRAER ERJ 190-200 VARIANT)

I. General

1. Aeroplane: Embraer ERJ 190-200 (see Note 2)

2. EASA Validation Application Date: 30 March 2003
   (Reference date for EASA validation)

3. EASA Validation Date: 17 July 2006
   (JAA recommendation)

II. Certification Basis

1. Reference Date for ANAC Certification: 31 December 2001

2. ANAC Certification Date: 30 June 2006
   ANAC Type Certificate Data Sheet No. EA-2005T13


4. EASA Airworthiness Requirements:
   
   4.1 Applicable JAR Requirements at the Reference Date:
       
       JAR-25 Change 15 (Effective 01 October 2000)
       CS-AWO

   4.2 Reversions: None Identified

5. EASA Special Conditions:

   The following Special Conditions have been applied.

   JAA/170/SC/CRI 170/B-12 Angle of Attack Limiting Function
   JAA/170/SC/CRI 170/B-15 Electronic Flight Control System: Control Surface Position Awareness
   JAA/190/SC/CRI 190/E-16 Engine and APU Intakes Icing
   JAA/170/SC/CRI 170/F-14 Air Data System (Smart Probes)
   JAA/170/SC/CRI 170/F-16 IRS: Align in Motion
   EASA/170/SC/CRI 170/F32 Head Up Guidance System
   JAA/170/SC/CRI 170/D-02 Towbarless Towing (Ref: PNPA 25D-275)
   JAA/170/SC/CRI 170/C-03 Interaction of Systems and Structure (NPA 25C-199)
   JAA/170/SC/CRI 170/C-15 Structural /Control Jam Conditions (JAR 25.671(c) (3)
JAA/170/SC/CRI 170/C-17  Static Strength Criteria for Engine Failure Loads
JAA/170/SC/CRI 170/E-08  Engine Sustained Imbalance
JAA/170/SC/CRI 170/E-10  Uncontrolled Thrust Increase
JAA/170/SC/CRI 190/E-18  Reversing System Requirements
JAA/170/SC/CRI 170/F-01  Protection from the effects of HIRF JAA Interim
JAA/170/SC/CRI 170/F-15  On Board Databases JAR 25.1301, 25.1309, TGL
EASA/170/SC/CRI 170/D-38  Application of heat release and smoke density
EASA/170/SC/CRI 170/D-39  VIP Cabin Interior / Shower installation
EASA/190/SC/CRI 190/H-01  Enhanced Airworthiness Programme for

6. **EASA Deviations:**

No deviations have been granted.

7. **EASA Equivalent Safety Findings:**

The following Equivalent Safety Findings have been granted:

<table>
<thead>
<tr>
<th>JAA/170/ESF/CRI</th>
<th>Description</th>
</tr>
</thead>
</table>
| B-17             | Performance information for take-off on contaminated Runways  
|                  | Equivalent Safety with JAR 25x1591 and AMJ 25x1591  
|                  | (Issue 8 dated 19 October 2009): JAR 25x1591 and AMJ 25x1591 superseded by CS-25.1591 and AMC 25.1591 at Amdt 2 |
| C-04             | Vibration Buffet and Aeroelastic Stability  
|                  | Equivalent Safety with JAR 25.629 and NPA 25BCD-236 |
| C-21             | Fuel Tank Crashworthiness  
|                  | Equivalent Safety with JAR 25.963(d) and JAR 25.561 |
| D-05             | Hydraulic Systems  
|                  | Equivalent Safety with JAR 25.1435 |
| D-06             | Wheels and Brakes  
|                  | Equivalent Safety with JAR 25.731 and JAR 25.735 |
| D-07             | Fuselage Doors  
|                  | Equivalent Safety with JAR 25.783 |
| D-17             | Type and Number of Passenger Emergency Exits  
| D-18             | Packs Off Take Off  
|                  | Equivalent Safety with JAR 25.831(a) |
| D-19             | Reinforced Security Cockpit Door  
| D-23             | Thermal Acoustic Linings (ESF)  
|                  | Equivalent Safety with JAR25.853(a) |
| D-27             | Tyre Speed Rating  
|                  | Equivalent Safety with JAR 25.733 |
| D-28             | Seat Mounted Items of Mass/ Cabin Surveillance Systems/Bulkhead Exit Signs  
8. **EASA Environmental Standards:**


9. **EASA Operational Suitability Data**

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

**MMEL:** As per CRI A-MMEL, the applicable certification basis for the establishment of Operational Suitability Data (OSD) MMEL is:
JAR MMEL/MEL Amendment 1, Section 1 with CS-MMEL Book 2 Initial issue as AMC/GM.

**FCD:** As per CRI A-FCD, the applicable certification basis for the establishment of Operational Suitability Data (OSD) Flight Crew is:

**CCD:** As per CRI A-CCD, the applicable certification basis for the establishment of Operational Suitability Data (OSD) Cabin Crew is:
III. Technical Characteristics and Operational Limitations

1. Production Basis: Manufactured under Production Certificate (ANAC COP E-7203-1)

2. Design Standard: Defined by Report 190-200TDSD_EASA “Type Design Standard Document” at Revision -

3. Description: Low wing jet transport with a conventional tail unit configuration, powered by two high bypass turbofan engines mounted on pylons beneath the wings.

   The structure is conventional, with an aluminum-alloy fuselage, wing, tail-plane and fin; while ailerons, flaps, spoilers, elevator, and rudder are of composite material. The landing gear is retractable tricycle type, and twin wheeled, with carbon main landing gear wheel brakes.

4. Dimensions: Length 38.66 m (126 ft 10 in)  
   Span 28.72 m (94 ft 3 in)  
   Height 10.57 m (34 ft 8 in)  
   Wing Area 92.53 m² (996 ft²)

5. Engines: Two General Electric CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7 Turbofan Engines (see Note 1)

   Limitations: See EASA Engine TCDS No. IM.E.021 or Airplane Flight Manual

6. Auxiliary Power Unit: Pratt & Whitney Rzeszów S.A. APS2300

   Limitations: Refer to the APU ETSO and DDP referenced therein

7. Propellers: N/A

8. Fuel: Refer to applicable approved manuals

9. Oil: Refer to applicable approved manuals

10. Airspeeds: See Airplane Flight Manual

11. Maximum Operating Altitude: 12, 497 m (41,000 ft) pressure altitude

12. All Weather Capability: Cat II, CATIIIa Autoland without Rollout, Head-Up Guidance System with LVTO/CATIIIa/Rollout

13. Maximum Certified Weights:

<table>
<thead>
<tr>
<th>Phase</th>
<th>190-200STD</th>
<th>190-200 LR</th>
<th>190-200 IGW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi and Ramp</td>
<td>107914 lb</td>
<td>48 950 kg</td>
<td>112324 lb</td>
</tr>
<tr>
<td>Take-off</td>
<td>107562 lb</td>
<td>48 790 kg</td>
<td>111971 lb</td>
</tr>
<tr>
<td></td>
<td>101411 lb(1)</td>
<td>46000 kg(1)</td>
<td>107562 lb(2)</td>
</tr>
<tr>
<td>Landing</td>
<td>99206 lb</td>
<td>45 000 kg</td>
<td>99206 lb</td>
</tr>
<tr>
<td>Zero Fuel</td>
<td>93695 lb</td>
<td>42 500 kg</td>
<td>93695 lb</td>
</tr>
</tbody>
</table>

(1) If SB 190-00-0038 applied  
(2) For airplanes Post-Mod. SB 190-00-0076 or equipped with an equivalent modification factory incorporated.
14. **Centre of Gravity:**

See Airplane Flight Manual

15. **Datum:**

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.

16. **Mean Aerodynamic Chord (MAC):**

3.682 m (12ft. 1 in.)

17. **Levelling Means:**

See Weight and Balance manual

18. **Minimum Flight Crew:**

Two (Pilot and Co-pilot) for all types of flight

19. **Maximum Passenger Capacity:**

124 Passengers

20. **Exits:**

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Size mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Main Fwd LH</td>
<td>1 Type I</td>
<td>780 mm (w) x 1840 mm (h)</td>
</tr>
<tr>
<td>2 Main Aft LH</td>
<td>1 Type I</td>
<td>670 mm (w) x 1814 mm (h)</td>
</tr>
<tr>
<td>3 Overwing Emergency Doors (LH)</td>
<td>1 Type III</td>
<td>530 mm (w) x 1032 mm (h)</td>
</tr>
<tr>
<td>4 Overwing Emergency Doors (RH)</td>
<td>1 Type III</td>
<td>530 mm (w) x 1032 mm (h)</td>
</tr>
<tr>
<td>5 Service (Fwd, RH)</td>
<td>1 Type I</td>
<td>640 mm (w) x 1380 mm (h)</td>
</tr>
<tr>
<td>6 Service (Aft RH)</td>
<td>1 Type 1</td>
<td>670 mm (w) x 1395 mm (h)</td>
</tr>
</tbody>
</table>

Additionally, for crew emergency evacuation purposes, the following exits are available on both sides:

- Cockpit side window (2)  
- Flight Crew Emergency Exit 483 mm x 508 mm

21. **Baggage/Cargo Compartment:**

<table>
<thead>
<tr>
<th>Location</th>
<th>Class</th>
<th>Volume m³ (ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Fwd (Underfloor)</td>
<td>C</td>
<td>13.8 m³ (488 ft³)</td>
</tr>
<tr>
<td>Rear Aft (Underfloor)</td>
<td>C</td>
<td>12.7 m³ (448 ft³)</td>
</tr>
</tbody>
</table>

22. **Wheels and Tyres:**

- **Nose Assy (Qty 2)** Tyre/Wheel: 24x7.7 16PR / 24x7.7 R10*
- **Main Assy (Qty 4)** Tyre/Wheel: H41x16.0-20 22PR / H41x16.0 R20*Speed Rating: 225 mph

*The radial tyre is an optional item for ERJ190-200.*
IV. Operating and Servicing Instructions

1. Flight Manual:
   Airplane Flight Manual, Document No. AFM 1913

2. Mandatory Maintenance Instructions:
   2.1 Aircraft Maintenance Manual (Customised to aircraft configuration)
   2.2 Maintenance Review Board Report Ref: MRB 1928, Revision 1 or Subsequent JAA approved revision
   2.3 Airworthiness Limitations and Certification Maintenance Requirements:
       MRB Report P/N 1928:
       Appendix A Part 1 (Certification Maintenance Requirements)
       Appendix A Part 2 (Airworthiness Limitations Inspections)
       Appendix A Part 3 (Fuel System Limitation Items - FSL)
       Appendix A Part 4 (Life Limits Items – LLI)
   2.4 Structural Repair Manual SRM-2411 is applicable.

3. Service Letters and Service Bulletins: As published by Embraer and approved by ANAC.

4. Required Equipment: Required equipment is listed in Embraer Document Reference 190CCC009: “Embraer ERJ 190 Build Standard for Airplanes to be delivered to European Countries”
V. Operational Suitability Data (OSD)

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.071 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List
   a. The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-MMEL and as documented in Embraer 170/175/190/195 EASA Master Minimum Equipment List MMEL-5814, Revision Original, December 2015, or later approved revisions.
   b. Required for entry into service by EU operator.

2. Flight Crew Data
   a. The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-FCD and as documented in EASA Operational Suitability Data (OSD) Flight Crew - ERJ 170/190 Report 170MSO092, Orig. Revision, dated 04 December 2015, or later approved revisions.
   b. Required for entry into service by EU operator.
   c. Pilot Type Rating: The licence endorsement for the ERJ 190-200 models aircraft is "EMB170". The ERJ 190 and the ERJ 170 series aircraft are variants of the same type of aircraft.

3. Cabin Crew Data
   a. The Cabin Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-CCD and as documented in Embraer 170/175/190/195 Operational Suitability Data Report, Cabin Crew Qualifications - Revision 2, dated 12 June 2014, or later approved revisions.
   b. Required for entry into service by EU operator.
   c. The Embraer 190/195 aircraft models are determined to be variants to the Embraer 170/175 aircraft models.
VI Notes

Note 1 - The CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1 and CF34-10E7 engines designation, as presented in the Engine Parts List, must contain the suffix Gxx, which defines the specific engine configuration. For the ERJ 190-100 and ERJ 190-200 models, the following designations are approved for operation: CF34-10E6G03, CF34-10E6A1G03, CF34-10E5G03, CF34-10E5A1G03, CF34-10E6G05, CF34-10E6A1G05, CF34-10E5G05, CF34-10E5A1G05, CF34-10E7G03, CF34-10E7G05, CF34-10E6G07, CF34-10E6A1G07, CF34-10E5G07 and CF34-10E5A1G07, CF34-10E7G07

The engine nameplate may display the model (example: CF34-10E6) and the Gxx suffix (example: G05) in separate fields.

CF34-10E Block 2 engines are identified with the suffix “G07”

Note 2 - The models ERJ 190-200 are often referred to in Embraer marketing literature as “EMBRAER 195”. The ERJ 190-200 IGW is referred to in Embraer marketing literature as “EMBRAER 195 AR”. These names are strictly marketing designations and are not part of the official models designation.

EASA Approval Dates:

17. July 2006:
ERJ 190-200 STD
ERJ 190-200 LR
ERJ 190-200 IGW

Note 3 – The PRIMUS EPIC® Load 4.4 or subsequent approved loads have to be installed

Note 4 – The thermal and acoustic insulation material that meets the flammability certification requirement CS 25.856 (b) has been approved for ERJ190-100 and ERJ190-200 models (except ERJ 190-100 ECJ) according to Design Change Approval (DCA) 0190-025-00147-2008/EASA and it was addressed with "Elect to comply" CRI D-24 "Thermal Acoustic Insulation Material".
SECTION 4 (EMBRAER ERJ 190-300 VARIANT)

I. General

1. Aeroplane: Embraer ERJ 190-300 (see Note 2)

2. EASA Validation Application Date: 30 July 2013
   (Reference date for EASA validation)

3. EASA Validation Date: 28 February 2018

II. Certification Basis

1. Reference Date for ANAC Certification: 29 July 2013

2. ANAC Certification Date: 28 February 2018

   ANAC Type Certificate Data Sheet No. EA-2005T13

3. ANAC Certification Basis:

   RBAC 25 (Airworthiness Standards: Transport Category Airplanes), effective on June 12, 2013, corresponding to the 14 CFR Part 25, including amendments 25-1 through 25-134, plus the following amendments:
   o Amendment 25-135 in entirety
   o Amendment 25-136 in entirety

   Besides the RBAC 25 amendments listed above, for the sake of harmonization between the ANAC and FAA certification basis, Embraer proposes to adopt as reference the following additional requirements:
   US 14 CFR Part 25 (Airworthiness Standards: Transport Category Airplanes), including the following amendments:
   o Amendment 25-137 in entirety
   GCF-1608/2017 Annex – 4/8
   o Amendment 25-138 in entirety
   o Amendment 25-139 in entirety
   o Amendment 25-141 in entirety

   No reversion to earlier amendments of Part 25, as prescribed under § 21.101(b)(3), was identified for this project.

4. EASA Airworthiness Requirements:

   4.1 Applicable Requirements at the Reference Date:

      CS 25 Amdt. 13 (dated 10 June 2013)
      CS 25.851(a)(6) at Amdt. 18 in regards to the equipment installation and qualification of Halon free hand-held Fire Extinguishers
      CS-AWO Initial Issue (dated 17 October 2003)

   4.2 Reversions: None Identified
5. **EASA Special Conditions:**

The following Special Conditions have been applied.

- **E2/B-25** Flight Envelope protection: General Requirements
- **E2/B-28** Flight Envelope protection: High AoA Protection
- **E2/B-29** Performance Credit for ATTCS During Go-Around
- **E2/C-26** Landing Pitchover Condition
- **E2/D-46** Electronic Flight Control System: Control Surface Position Awareness, Multiple Modes of Operation, Flight Control in all Attitudes
- **E2/D-49** Seats with Non-Traditional, Large, Non-Metallic Panels
- **E2/D-53** Electrical/Electronic Equipment Bay Fire Detection and Smoke Penetration
- **E2/E-20** Water / Ice in fuel
- **E2/E-21** Cowl loss prevention
- **JAA/170/SC/CRI 170/F-01** Protection from the effects of HIRF JAA Interim Policy INT/POL/25/2 Issue 2
- **170,190/F-40B** ERJ 170/190 DataLink Services
- **170/F-41** Flight Recorders including Data Link Recording
- **E2/F-58** Security Protection of Aircraft Systems & Networks
- **E2/F-65** Non-rechargeable Lithium Ion Batteries

6. **EASA Deviations:**

No deviations have been granted.

7. **EASA Equivalent Safety Findings:**

The following Equivalent Safety Findings have been granted:

- **E2/B-24** Electronic Flight Control System: Mistrim Manoeuvring
- **E2/D-44** Flight Control System Failure Criteria
- **E2/D-47** Tyre Speed Rating
- **E2/D-48** Emergency Exit Locator Sign
- **E2/D-51** Protection of Flight Crew Compartment - Reduced Energy
- **E2/D-69** Aerodynamic Seals and Flap track fairings compliance to CS 25.867
- **E2/D-72** Minor Obstruction to Type III Exit
- **E2/D-73** Combined Aircraft Pressurization Outflow and Positive Pressure Differential Relief Valves
- **E2/E-22** PW1900G Nacelle designated fire zones
- **E2/E-34** Lack of On/Off Switch for Automatic Takeoff Thrust Control System (ATTCS)
- **E2/F-47** Lavatory Oxygen System Restoration
- **E2/F-64** Pneumatic Systems Harmonized 25.1438
- **E2/F-68** Crew Determination of Quantity of Oxygen in Lavatory and Cabin Oxygen System distributed Bottles
- **E2/F-70** Determination of Minimum Oxygen Flow for the Passenger Oxygen System
- **E2/F-72** Position Lighting Systems Maximum Overlapping Intensity Deviations
- **E2/G-05** Digital only Display for Powerplant System Indications
8. **EASA Environmental Standards:**

Noise: CS 36 Amdt. 3 (dated 29. January 2013). See the appropriate EASA Approved TCDSN for more information.

Fuel: CS 34 Amdt. 1 (dated 28 January 2013)

9. **EASA Operational Suitability Data**

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

MMEL: The applicable certification basis for the establishment of Operational Suitability Data (OSD) MMEL is:

JAR MMEL/MEL Amendment 1, Section 1 with CS-MMEL Book 2 Initial issue as AMC/GM.

FCD: The applicable certification basis for the establishment of Operational Suitability Data (OSD) Flight Crew is:


CCD: The applicable certification basis for the establishment of Operational Suitability Data (OSD) Cabin Crew is:


### III. Technical Characteristics and Operational Limitations

1. **Production Basis:** Manufactured under [Production Certificate (ANAC COP E-7203-1)](http://example.com)

2. **Design Standard:** Defined by Report 196TDD300 “Type Design Standard Document” at Revision -

3. **Description:** Low wing jet transport with a conventional tail unit configuration, powered by two high bypass turbofan engines mounted on pylons beneath the wings.

   The structure is conventional, with an aluminum-alloy fuselage, wing, tail-plane and fin; while ailerons, flaps, spoilers, elevator, and rudder are of composite material. The landing gear is retractable tricycle type, and twin wheeled, with carbon main landing gear wheel brakes.

4. **Dimensions:**

   - Length 36.237 m (118 ft 10 in)
   - Span 33.72 m (110 ft 4 in)
   - Height 10.69 m (35 ft 1 in)
   - Wing Area 103 m$^2$ (1108.7 ft$^2$)

5. **Engines:**

   Two Pratt & Whitney PW1919G or two Pratt & Wittney PW1922G Turbofan Engines

   Limitations: See EASA Engine TCDS No. IM.E.090 or Airplane Flight Manual

6. **Auxiliary Power Unit:**

   - Pratt & Whitney Rzeszów S.A. APS2600(E)
   - Limitations: Refer to the APU ETSO and DDP referenced therein
7. Propellers: N/A
8. Fuel: Refer to applicable approved manuals
9. Oil: Refer to applicable approved manuals
10. Airspeeds: See Airplane Flight Manual
11. Maximum Operating Altitude: 12, 497 m (41,000 ft) pressure altitude
12. All Weather Capability: Cat II, Cat III Fail-Passive Autoland without Rollout Guidance
13. Maximum Certified Weights:

<table>
<thead>
<tr>
<th>Taxi and Ramp</th>
<th>Take-off</th>
<th>Landing</th>
<th>Zero Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>50190 kg (14)</td>
<td>110209 lb (28)</td>
<td>49990 kg (14)</td>
<td>108136 lb</td>
</tr>
<tr>
<td>50700 kg (1)</td>
<td>111333 lb (15)</td>
<td>50500 kg (1)</td>
<td>49050 kg</td>
</tr>
<tr>
<td>51200 kg (2)</td>
<td>112435 lb (16)</td>
<td>51000 kg (2)</td>
<td>102955 lb</td>
</tr>
<tr>
<td>51700 kg (3)</td>
<td>113538 lb (17)</td>
<td>51500 kg (3)</td>
<td>46700 kg</td>
</tr>
<tr>
<td>52200 kg (4)</td>
<td>114640 lb (18)</td>
<td>52000 kg (4)</td>
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</tr>
<tr>
<td>52700 kg (5)</td>
<td>115742 lb (19)</td>
<td>52500 kg (5)</td>
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</tr>
<tr>
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<td>116844 lb (20)</td>
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<tr>
<td>53700 kg (7)</td>
<td>117947 lb (21)</td>
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<tr>
<td>54200 kg (8)</td>
<td>119049 lb (22)</td>
<td>54000 kg (8)</td>
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<td>120151 lb (23)</td>
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<tr>
<td>55200 kg (10)</td>
<td>121254 lb (24)</td>
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</tr>
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<td>56700 kg (13)</td>
<td>124340 lb (27)</td>
<td>56400 kg (13)</td>
<td></td>
</tr>
</tbody>
</table>

(x) For airplanes Post-Mod. or equipped with an equivalent modification factory incorporated.

15. Datum: A perpendicular plane to the fuselage centerline, located at 13 571 mm ahead of the wing stub front spar.
16. Mean Aerodynamic Chord (MAC): 3.665 m (12ft. 0 in.)
17. Levelling Means: See Weight and Balance manual
18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight
19. **Maximum Passenger Capacity & Minimum Cabin Crew:**

The table below provides the certified Maximum Passenger Seating Capacities (MPSC), the corresponding cabin configuration (exit arrangement) and the associated minimum numbers of cabin crew members used to demonstrate compliance with the certification requirement:

<table>
<thead>
<tr>
<th>Passenger Seating Capacity &amp; Cabin Configuration</th>
<th>Cabin crew</th>
</tr>
</thead>
<tbody>
<tr>
<td>114 (I-III-I)</td>
<td>3</td>
</tr>
</tbody>
</table>

20. **Exits:**

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Size mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Main Fwd LH</td>
<td>1 Type I</td>
<td>750 mm (w) x 1820.9 mm (h)</td>
</tr>
<tr>
<td>2 Main Aft LH</td>
<td>1 Type I</td>
<td>635 mm (w) x 1706.1 mm (h)</td>
</tr>
<tr>
<td>3 Overwing Emergency Doors (LH)</td>
<td>1 Type III</td>
<td>601.6 mm (w) x 1032.8 mm (h)</td>
</tr>
<tr>
<td>4 Overwing Emergency Doors (RH)</td>
<td>1 Type III</td>
<td>601.6 mm (w) x 1032.8 mm (h)</td>
</tr>
<tr>
<td>5 Service (Fwd, RH)</td>
<td>1 Type I</td>
<td>611 mm (w) x 1351.6 mm (h)</td>
</tr>
<tr>
<td>6 Service (Aft RH)</td>
<td>1 Type I</td>
<td>632 mm (w) x 1373.9 mm (h)</td>
</tr>
</tbody>
</table>

Additionally, for crew emergency evacuation purposes, the following exits are available on both sides:

- Cockpit side window (2)
- Flight Crew Emergency Exit 483 mm x 508 mm

21. **Baggage/Cargo Compartment:**

<table>
<thead>
<tr>
<th>Location</th>
<th>Class</th>
<th>Volume m³ (ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Fwd (Underfloor)</td>
<td>C</td>
<td>10.09 m³ (356.3 ft³)</td>
</tr>
<tr>
<td>Rear Aft (Underfloor)</td>
<td>C</td>
<td>11.45 m³ (404.4 ft³)</td>
</tr>
</tbody>
</table>

22. **Wheels and Tyres:**

- Nose Assy (Qty 2) Tyre/Wheel: 27x8.5R12 16PR / 27x8.5-R12*
- Main Assy (Qty 4) Tyre/Wheel: H42x16.0R20 24PR / H42x16.0-R20* Speed Rating: 225 mph

* The radial tyre is a standard item for ERJ190-300.

**IV. Operating and Servicing Instructions**

1. **Flight Manual:**

   Airplane Flight Manual, Document No. AFM 5693-001

2. **Mandatory Maintenance Instructions:**

   2.1 Maintenance Review Board Report Ref: MRB 5881, Revision 0 or Subsequent EASA approved revision

   2.2 Airworthiness Limitations and Certification Maintenance Requirements:
MRB Report P/N 5881:
Appendix A Part 1 (Certification Maintenance Requirements)
Appendix A Part 2 (Airworthiness Limitations Inspections)
Appendix A Part 3 (Fuel System Limitation Items - FSL)
Appendix A Part 4 (Life Limits Items – LLI)

2.3 Structural Repair Manual SRM-2411 is applicable.

3. **Service Letters and Service Bulletins**: As published by Embraer and approved by ANAC.

4. **Required Equipment**: Required equipment is listed in Embraer Report 196TDD300 “Type Design Standard Document” at Revision –

V. **Operational Suitability Data (OSD)**

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.071 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. **Master Minimum Equipment List**

   a. The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-MMEL and as documented in EMBRAER 170/175/190/195/E2/LINEAGE 1000 EASA Master Minimum Equipment List MMEL-5814, Revision 4, dated 6 February 2018, or later approved revisions.
   b. Required for entry into service by EU operator.

2. **Flight Crew Data**

   a. The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-FCD and as documented in EASA Operational Suitability Data (OSD) Flight Crew - ERJ 170/190 Report 170MSO092, Revision B, dated 26 January 2018, or later approved revisions.
   b. Required for entry into service by EU operator.
   c. Pilot Type Rating: The licence endorsement for the ERJ 190-300 models aircraft is "EMB170". The ERJ 190 and the ERJ 170 series aircraft are variants of the same type of aircraft.

3. **Cabin Crew Data**

   a. The Cabin Crew Data has been approved as per the defined Operational Suitability Data Certification Basis: CS-CCD, Initial Issue, and as documented in the “Embraer Report No: 196MSO1007, Initial Issue, dated 15 December 2017- Operational Suitability Data Cabin Crew, Program: ERJ 170/ ERJ 175/ ERJ 190/ ERJ 195/ ERJ 190E2”, or later approved revisions.
   b. Required for entry into service by EU operator.
c. For cabin crew, the ERJ 190-300 aircraft model is determined to be a variant to the ERJ 190-100 model. For cabin crew, the ERJ 190-300 aircraft model is determined to be a variant to the ERJ 190/195 and ERJ 170/175 models.

VI  Notes

Note 1 - The models ERJ 190-300 are often referred to in Embraer marketing literature as “EMBRAER 190E2”. These names are strictly marketing designations and are not part of the official models designation.
SECTION 5 (EMBRAER ERJ 190-400 VARIANT)

I. General

1. Aeroplane: Embraer ERJ 190-400 (see Note 1)

2. EASA Validation Application Date: 20 July 2014
   (Reference date for EASA validation)

3. EASA Validation Date: 15 April 2019

II. Certification Basis

1. Reference Date for ANAC Certification: 30 April 2015

2. ANAC Certification Date: 15 April 2019

   ANAC Type Certificate Data Sheet No. EA-2005T13

3. ANAC Certification Basis:

   RBAC 25 (Airworthiness Standards: Transport Category Airplanes), effective on June
   12, 2013, corresponding to the 14 CFR Part 25, including amendments 25-1 through 25-
   134, plus the following amendments:
   - Amendment 25-135 in entirety
   - Amendment 25-136 in entirety

   Besides the RBAC 25 amendments listed above, for the sake of harmonization between
   the ANAC and FAA certification basis, Embraer proposes to adopt as reference the
   following additional requirements:
     including the following amendments:
     - Amendment 25-137 in entirety
     - GCF- 1608/2017 Annex – 4/8
     - Amendment 25-138 in entirety
     - Amendment 25-139 in entirety
     - Amendment 25-141 in entirety

   No reversion to earlier amendments of Part 25, as prescribed under § 21.101(b)(3), was
   identified for this project.

4. EASA Airworthiness Requirements:

   4.1 Applicable Requirements at the Reference Date:

   - CS 25 Amdt. 14 (dated 19 December 2013)
   - CS 25.851(a)(6) at Amdt. 18 in regards to the equipment installation and
     qualification of Halon free hand-held Fire Extinguishers
   - CS-AWO Initial Issue (dated 17 October 2003)
   - CS Definitions at Amendment 2

   4.2 Reversions:

   - CS 25.963(e)(1) is applied at Amendment 13 with respect to fuel tank protection from
     engine debris.
     Note: For the fuel tank protection from wheel & tyre failure debris CS 25.963(e)(1) and
     associated CS 25.734 will be applied at amendment 14.
5. **EASA Special Conditions:**

The following Special Conditions have been applied.

- **E2/B-25** Flight Envelope protection: General Requirements (cover CRI to ANAC FCAR EV-37)
- **E2/B-28** Flight Envelope Protection: High AoA Protection Function (cover CRI to ANAC FCAR EV-25)
- **E2/B-29** Performance Credit for ATTCS during Go-Around (cover CRI to ANAC FCAR PR-02)
- **E2/C-26** Landing Pitchover Condition (cover CRI to ANAC FCAR ES-07)
- **E2/D-46** Electronic Flight Control System: Control Surface Position Awareness (cover CRI to ANAC FCAR SM-01)
- **E2/D-49** Seats with Non-Traditional, Large, Non-Metallic Panels (cover CRI to ANAC FCAR EI-13)
- **E2/D-53** Electrical/Electronic Equipment Bay Fire Detection and Smoke Penetration (cover CRI to ANAC FCAR SM-09)
- **F-40B** Data Link Services
- **F-41** Flight Recorders including Data Link Recording
- **E2/E-20** Water / Ice in Fuel System
- **E2/E-21** Cowl Loss Prevention
- **F-01** Protection from the Effects of HIRF
- **E2/F-58** Security Protection of Aircraft Systems & Networks
- **E2/F-65** Non-rechargeable Lithium Ion Batteries (cover CRI to ANAC FCAR SE-09)

6. **EASA Deviations:**

No deviations have been granted.

7. **EASA Equivalent Safety Findings:**

The following Equivalent Safety Findings have been granted:

- **E2/B-24** EFCS: Mistrim Manoeuvring (cover CRI to ANAC FCAR EV-35)
- **E2/D-44** Flight Control System Failure Criteria
- **E2/D-47** Tyre Speed Rating
- **E2/D-48** Emergency Exit Locator Sign (cover CRI to ANAC FCAR EI-18)
- **E2/D-51** Protection of Flight Crew Compartment - Reduced Energy (cover CRI to ANAC FCAR EI-16)
- **E2/D-69** Aerodynamic Seals and Flap track fairings compliance to CS 25.867
- **E2/D-72** Minor Obstruction to Type III Exit (cover CRI to ANAC FCAR EI-29)
- **E2/D-73** Combined Aircraft Pressurization Outflow and Positive Pressure Differential (cover CRI to ANAC FCAR SM-18)
- **E2/E-22** PW1900G Nacelle designated fire zones
- **E2/E-34** Lack of On/Off Switch for Automatic Takeoff Thrust Control System (ATTCS) (cover CRI to ANAC FCAR PR-18)
- **F-47** Lavatory Oxygen System Restoration
- **E2/F-64** Pneumatic Systems Harmonized 25.1438 (cover CRI to ANAC FCAR SM-21)
8. EASA Environmental Standards:

Noise: CS 36 Amdt. 3 (dated 29. January 2013). See the appropriate EASA Approved TCDSN for more information.

Fuel: CS 34 Amdt. 1 (dated 28 January 2013)

9. EASA Operational Suitability Data

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

MMEL: The applicable certification basis for the establishment of Operational Suitability Data (OSD) MMEL is:
JAR MMEL/MEL Amendment 1, Section 1 with CS-MMEL Book 2 Initial issue as AMC/GM.

FCD: The applicable certification basis for the establishment of Operational Suitability Data (OSD) Flight Crew is:

CCD: The applicable certification basis for the establishment of Operational Suitability Data (OSD) Cabin Crew is:

III. Technical Characteristics and Operational Limitations

1. Production Basis: Manufactured under Production Certificate (ANAC COP E-7203-1)

2. Design Standard: Defined by Report 196TDD400 “Type Design Standard Document” at Revision A

3. Description: Low wing jet transport with a conventional tail unit configuration, powered by two high bypass turbofan engines mounted on pylons beneath the wings.

   The structure is conventional, with an aluminum-alloy fuselage, wing, tail-plane and fin; while ailerons, flaps, spoilers, elevator, and rudder are of composite material. The landing gear is retractable tricycle type, and twin wheeled, with carbon main landing gear wheel brakes.

4. Dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
<th>Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>41.603 m</td>
<td>(136 ft 49 in)</td>
</tr>
<tr>
<td>Span</td>
<td>35.124 m</td>
<td>(115 ft 2 in)</td>
</tr>
<tr>
<td>Height</td>
<td>10.71 m</td>
<td>(35 ft 2 in)</td>
</tr>
<tr>
<td>Wing Area</td>
<td>103 m²</td>
<td>(1108.7 ft²)</td>
</tr>
</tbody>
</table>
5. **Engines:**

Two Pratt & Whitney Turbofan Engines, models: PW1921G or PW1923G or PW1923G-A

Limitations: See EASA Engine TCDS No. IM.E.090 or Airplane Flight Manual

6. **Auxiliary Power Unit:**

Pratt & Whitney Rzeszów S.A. APS2600[E]

Limitations: Refer to the APU ETSO and DDP referenced therein

7. **Propellers:**

N/A

8. **Fuel:**

Refer to applicable approved manuals

9. **Oil:**

Refer to applicable approved manuals

10. **Airspeeds:**

See Airplane Flight Manual

11. **Maximum Operating Altitude:**

12, 497 m (41,000 ft) pressure altitude

12. **All Weather Capability:**

Cat II, Cat III Fail-Passive Autoland without Rollout Guidance

13. **Maximum Certified Weights:**

<table>
<thead>
<tr>
<th>190-400 Phase</th>
<th>Taxi and Ramp</th>
<th>Take-off</th>
<th>Landing</th>
<th>Zero Fuel</th>
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<tbody>
<tr>
<td>122136 lb(1)</td>
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<td>129852 lb(8)</td>
<td>58900 kg(8)</td>
<td>129411 lb(8)</td>
<td>58700 kg(8)</td>
<td>131615 lb</td>
</tr>
<tr>
<td>130954 lb(9)</td>
<td>59400 kg(9)</td>
<td>130513 lb(9)</td>
<td>59200 kg(9)</td>
<td>132718 lb</td>
</tr>
<tr>
<td>132056 lb(10)</td>
<td>59900 kg(10)</td>
<td>131615 lb(10)</td>
<td>59700 kg(10)</td>
<td>133820 lb</td>
</tr>
<tr>
<td>133159 lb(11)</td>
<td>60400 kg(11)</td>
<td>132718 lb(11)</td>
<td>60200 kg(11)</td>
<td>135584 lb</td>
</tr>
<tr>
<td>135363 lb(13)</td>
<td>61400 kg(13)</td>
<td>134922 lb(13)</td>
<td>61200 kg(13)</td>
<td>136686 lb</td>
</tr>
<tr>
<td>136265 lb(14)</td>
<td>61700 kg(14)</td>
<td>135584 lb(14)</td>
<td>61500 kg(14)</td>
<td>136686 lb</td>
</tr>
<tr>
<td>137127 lb(15)</td>
<td>62200 Kg(15)</td>
<td>136686 lb(15)</td>
<td>62000 Kg(15)</td>
<td>136686 lb</td>
</tr>
</tbody>
</table>

(x) For airplanes Post-Mod. or equipped with an equivalent modification factory incorporated.

(1)SB 190E2-00-0029 (MTOW 55200 kg - 121695 lb)

(2)SB 190E2-00-0030 (MTOW 55700 kg - 122797 lb)

(3)SB 190E2-00-0031 (MTOW 56200 kg - 123899 lb)

(4)SB 190E2-00-0032 (MTOW 56700 kg - 125002 lb)

(5)SB 190E2-00-0033 (MTOW 57200 kg - 126104 lb)

(6)SB 190E2-00-0034 (MTOW 57700 kg - 127206 lb)

(7)SB 190E2-00-0035 (MTOW 58200 kg - 128309 lb)

(8)SB 190E2-00-0036 (MTOW 58700 kg - 129411 lb)

(9)SB 190E2-00-0037 (MTOW 59200 kg - 130513 lb)

(10)SB 190E2-00-0038 (MTOW 59700 kg - 131615 lb)

(11)SB 190E2-00-0039 (MTOW 60200 kg - 132718 lb)

(12)SB 190E2-00-0040 (MTOW 60700 kg - 133820 lb)

(13)SB 190E2-00-0041 (MTOW 61200 kg - 134922 lb)

(14)SB 190E2-00-0042 (MTOW 61500 kg - 135584 lb)

(15)SB 190E2-00-0053 (MTOW 62000 Kg - 136686 lb)
14. **Centre of Gravity:** See Airplane Flight Manual

15. **Datum:** A perpendicular plane to the fuselage centerline, located at 15 903 mm ahead of the wing stub front spar.

16. **Mean Aerodynamic Chord (MAC):** 3.665 m (12ft. 0 in.)

17. **Levelling Means:** See Weight and Balance manual

18. **Minimum Flight Crew:** Two (Pilot and Co-pilot) for all types of flight

19. **Maximum Passenger Capacity & Minimum Cabin Crew:**

   The table below provides the certified Maximum Passenger Seating Capacities (MPSC), the corresponding cabin configuration (exit arrangement) and the associated minimum numbers of cabin crew members used to demonstrate compliance with the certification requirement:

<table>
<thead>
<tr>
<th>Passenger Seating Capacity &amp; Cabin Configuration</th>
<th>Cabin crew</th>
</tr>
</thead>
<tbody>
<tr>
<td>146 (I-III-III-I)</td>
<td>3</td>
</tr>
</tbody>
</table>

20. **Exits:**

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Size mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>750 mm (w) x 1820.9 mm (h)</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>635 mm (w) x 1706.1 mm (h)</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>601.6 mm (w) x 1032.8 mm (h)</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>601.6 mm (w) x 1032.8 mm (h)</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>611 mm (w) x 1351.6 mm (h)</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>632 mm (w) x 1373.9 mm (h)</td>
</tr>
</tbody>
</table>

   Additionally, for crew emergency evacuation purposes, the following exits are available on both sides:

   - Cockpit side window (2)
   - Flight Crew Emergency Exit

   483 mm x 508 mm

21. **Baggage/Cargo Compartment:**

<table>
<thead>
<tr>
<th>Location</th>
<th>Class</th>
<th>Volume m³ (ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Fwd (Underfloor)</td>
<td>C</td>
<td>14.77 m³ (521.6 ft³)</td>
</tr>
<tr>
<td>Rear Aft (Underfloor)</td>
<td>C</td>
<td>15.20 m³ (536.8 ft³)</td>
</tr>
</tbody>
</table>

22. **Wheels and Tyres:**

   Nose Assy (Qty 2)  Tyre/Wheel: 27x8.5R12 16PR / 27x8.5-R12*
   Main Assy (Qty 4)  Tyre/Wheel: H42x16.0R20 24PR / H42x16.0-R20* Speed Rating: 225 mph

   * The radial tyre is a standard item for ERJ190-400.
IV. Operating and Servicing Instructions

1. Flight Manual:

Airplane Flight Manual, Document No. AFM 5693-001

2. Mandatory Maintenance Instructions:

2.1 Maintenance Review Board Report Ref: MRB 5881, Revision 1 or Subsequent EASA approved revision

2.2 Airworthiness Limitations and Certification Maintenance Requirements:

MRB Report Ref. MRB 5881 Revision 1:
Appendix A Part 1 (Certification Maintenance Requirements)
Appendix A Part 2 (Airworthiness Limitations Inspections)
Appendix A Part 3 (Fuel System Limitation Items - FSL)
Appendix A Part 4 (Life Limits Items – LLI)

2.3 Structural Repair Manual SRM-6736 is applicable.

3. Service Letters and Service Bulletins: As published by Embraer and approved by ANAC.

4. Required Equipment: Required equipment is listed in Embraer Report 196TDD400 “Type Design Standard Document” at Revision A

V. Operational Suitability Data (OSD)

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.071 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List

a. The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis and as documented in EMBRAER 170/175/190/195-190-E2/195-E2/LINEAGE 1000 EASA Master Minimum Equipment List MMEL-5814, Revision 6, dated 15 April 2019, or later approved revisions.
b. Required for entry into service by EU operator.

2. Flight Crew Data

a. The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-FCD and as documented in EASA Operational Suitability Data (OSD) Flight Crew - ERJ 170/190 Report 170MSO092, Revision E, dated 25 February 2019, or later approved revisions.
b. Required for entry into service by EU operator.
c. Pilot Type Rating: The licence endorsement for the ERJ 190-400 models aircraft is "EMB170". The ERJ 190 and the ERJ 170 series aircraft are variants of the same type of aircraft.
3. Cabin Crew Data

   a. The Cabin Crew Data has been approved as per the defined Operational Suitability Data Certification Basis: CS-CCD, Initial Issue, and as documented in the “Embraer Report No: 196MSO1007, revision A, dated 5 April 2019 - Operational Suitability Data Cabin Crew, Program: ERJ 170/ ERJ 175/ ERJ 190/ ERJ 195/ ERJ 190E2/ ERJ 195E2”, or later approved revisions.

   b. Required for entry into service by EU operator.

   c. For cabin crew, the ERJ 190-400 aircraft model is determined to be a variant to the ERJ 190-100 model. For cabin crew, the ERJ 190-400 aircraft model is determined to be a variant to the ERJ 190/195, the ERJ 170/175 and the ERJ 190-300 models.

VI Notes

Note 1 - The model ERJ 190-400 are often referred to in Embraer marketing literature as “EMBRAER 195-E2”. These names are strictly marketing designations and are not part of the official models designation.
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

AFM    Airplane Flight Manual
AMC    Acceptable Means of Compliance
ANAC   Agência Nacional De Aviação Civil (CAA Brazil)
APU    Auxiliary Power Unit
AWO    All Weather Operations
CRI    Certification Review Item
CS     Certification Specification
EASA   European Union Aviation Safety Agency
ES(F)  Equivalent Safety (Finding)
EWIS   Enhanced Wiring Interconnection System
FAA    Federal Aviation Administration
FAR    Federal Aviation Regulation
HIRF   High Intensity Radiated Field
ICA    Instructions for Continued Airworthiness
ICAO   International Civil Aviation Organization
JAA    Joint Aviation Authorities
JAR    Joint Aviation Requirements
MRB    Maintenance Review Board
NPA    Notice of Proposed Amendment
S/N    Serial Number
SB     Service Bulletin
SC     Special Condition
TC     Type Certificate
TCDS   Type Certificate Data Sheet

II. Type Certificate Holder Record

Embraer S.A.
Av. Brig. Faria Lima, 2170
12227-901 São Jose dos Campos SP
Brazil

Before 1 January 2022:
Yaborã Indústria Aeronáutica S.A.
Av. Brig. Faria Lima. 2170
12227-901 São Jose dos Campos SP
Brazil

Before 31 January 2020:
Embraer S.A.
Av. Brig. Faria Lima. 2170
12227-901 São Jose dos Campos SP
Brazil

Before January 2011:
Empresa Brasileira de Aeronáutica SA
Av. Brig. Faria Lima. 2170
12227-901 São Jose dos Campos SP
Brazil
SECTION: ADMINISTRATIVE - continued

III. Change Record
(starts with Issue 11)

<table>
<thead>
<tr>
<th>Iss.</th>
<th>Date</th>
<th>Changes</th>
</tr>
</thead>
</table>
| 11.0 | 02 Sept 2010 | - For all the ERJ 190 models it was included Special Condition 170/D-38 “Application of heat release and smoke density requirements to seat materials”; 190/D-39 “VIP Cabin Interior / Shower installation”; and 190/H-01 “Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS”.
   - Updated the Maximum Passenger Capacity to 114 Passengers for ERJ 190-100STD, 190-100 LR and 190-100 IGW, due to approval of DCA 0190-025-00077-2009/EASA.
   - Included the “Note 5” for ERJ 190-100 ECJ.
   - Updated the All Weather Capability for ERJ 190-200, including “CATAIlla Autoland without Rollout” due to approval of DCA 0190-022-00014-2008/EASA.
   - Included the Section 4 “Change Record”. |
| 12.0 | 04 July 2013 | - For ERJ 190-100 and ERJ 190-200 models, Section 2.II.7 and 3.II.7: Update ESF JAA/170/ES/CRI B-17
   - Section 2.III.13: MTOW reduced to 43740kg for ERJ 190-100
   - Section 3.IV.2.4: SRM -2411 is introduced |
| 13.0 | 02 June 2016 | - Section 2.II.6: reference of Firm Handhold Deviation corrected to D-33.
   - Section 2.II.7 & 3.II.7: ESF CRI F-47 is introduced for ERJ 190 models with DCA 0190-035-00074-2012/EASA embodied and ESF CRI F-50 is introduced for ERJ 190 models with DCA 0190-033-00027-2013/EASA embodied.
   - Introduction of reduced MTOW of 98988 lb / 44900 kg and 110209 lb / 49990 kg for ERJ 190-100 LR; and of 105359 lb / 47790 kg for ERJ 190-100 IGW, when DCA 0190-000-00032-2013/EASA is embodied.
   - Introduction of reduced MTOW of 101411 lb / 46000 kg for ERJ 190-200 STD, when DCA 0190-000-00011-2014/EASA is embodied.
   - Section V, Note 4: Reference of CRI “Installation of Door between passenger compartments” corrected to D-31. |
| 14.0 | 10 December 2015 | - Section 2.II.9: EASA Operational Suitability Data
   - Section 2.V: Operational Suitability Data
   - Section 3.II.9: EASA Operational Suitability Data
   - Section 3.V: Operational Suitability Data |
| 15.0 | 15 March 2016 | Section 2.III.13: Maximum Certified Weights
   - Reduced MTOW for ERJ 190-100 STD/LR introduced in accordance with DCA 0190-000-00201-2015/EASA Rev. A |
| 16.0 | 9 March 2017 | Section 2.III.13: Maximum Certified Weights
   - Reduced MTOW for ERJ 190-100 ECJ introduced in accordance with DCA 0190-000-00073-2016/EASA Rev. A
   - Section 3.II.9: EASA Operational Suitability Data
   - Reduced MTOW for ERJ 190-200 LR introduced in accordance with DCA 0190-000-00099-2016/EASA Rev. - |
| 17.0 | 28 February 2018 | Section 2.III.13: Maximum Certified Weights
   - Increased MTOW for ERJ 190-100 SR introduced in accordance with DCA 0190-000-00096-2017 /EASA Rev. B
   - Section 4: EMBRAER ERJ 190-300 VARIANT
   - New section 4 added for introduction of new ERJ 190-300 |
| Iss. 18.0 | 3 April 2018 | Section 4.III.5: Engines  
- Corrected the applicable engine models  
Section 4.III.6: Auxiliar Power Unit  
- Corrected the applicable APU model  
Section 4.III.13: Maximum Certified Weights  
- List of MTOW for ERJ-300 introduced in accordance with  
the approved approved type Design  
Section 4.III.15: Datum  
- Corrected the datum distance  
Section 4.IV.1:Flight Manual  
- Added the -001 to the AFM version  
Section 4.IV.4:Required Equipment  
- Updated the document reference |
| Iss. 19.0 | 15 April 2019 | Section 4.II.9: EASA Operational Suitability Data  
- References to CRIs removed  
Section 5: EMBRAER ERJ 190-400 VARIANT  
- New section 5 added for introduction of new ERJ 190-400 variant  
Section 6: Change Record  
Former section 5 shifted to section 6 |
| Iss. 20.0 | 31/01/2020 | Transfer of Type Certificate Holder from “Embraer S.A.” to  
“Yaborã Indústria Aeronáutica S.A.”  
EASA name reference changed to “European Union Aviation Safety Agency”  
Section 6:  
Section renamed from “Section 6 Change Record” to “Section: Administrative” |
| Iss. 21.0 | 28 August 2020 | Section 2.III.6: Auxiliary Power Unit  
- ETSO Holder corrected  
Section 3.III.6: Auxiliary Power Unit  
- ETSO Holder corrected  
Section 4.II.8: EASA Environmental Standards  
- EASA Certification Basis for Noise for ERJ 190-300 updated.  
Section 5.II.8: EASA Environmental Standards  
- EASA Certification Basis for Noise for ERJ 190-400 updated. |
| Iss. 22.0 | 26 January 2021 | Section 4.III Technical Characteristics and Operational Limitations  
- Updated the All Weather Capability for ERJ 190-300,  
adding 'Cat III Fail-Passive Autoland without Rollout Guidance’ due to approval of DCA 0190-022-00085-2018 |
| Iss. 23 | 9 June 2021 | Section 5.III Technical Description and Operational Limitations  
Updated MTOW from 61500 Kg to 62000 kg and MRW from 61700 Kg to 62200 Kg.  
Included note (15) SB 190E2-00-0053  
Editorial changes in Sections 2, 3, 4 and 5. |
| Iss. 24 | 31 January 2022 | TC Holder Transfer Update  
Section 5.III Technical Characteristics and Operational Limitations  
- Updated the All Weather Capability for ERJ 190-400,  
adding 'Cat III Fail-Passive Autoland without Rollout Guidance’ due to approval of DCA 0190-022-00077-2020  
Section 4 and 5.III Technical Characteristics and Operational Limitations |
<table>
<thead>
<tr>
<th>Limitations</th>
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<tr>
<td>- Editorial update for Pratt &amp; Whitney designation.</td>
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<tr>
<td>- Update on the APU Supplier to Pratt &amp; Whitney Rzeszów S.A.</td>
</tr>
<tr>
<td>- Editorial changes in Sections 1, 2, 3, 4 and 5</td>
</tr>
<tr>
<td>- Re-published on 1/1/2022 with re-formatted front page</td>
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--End of TCDS IM.A.071--