EASA

TYPE-CERTIFICATE
DATA SHEET

No. EASA.IM.A.001

for
EMBRAER ERJ 170

Type Certificate Holder:
Embraer S.A.

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

Airworthiness Category: Large Aeroplanes

For Models: ERJ 170-100 STD
ERJ 170-100 LR
ERJ 170-200 STD
ERJ 170-200 LR
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SECTION 1: EMBRAER ERJ 170-100 VARIANT

I. General

1. Type/ Model/ Variant: Embraer ERJ 170-100

2. Performance Class: A

3. Certifying Authority: Agência Nacional De Aviação Civil - ANAC
Gerência Geral de Certificação de Produtos Aeronáuticos
Av. Cassiano Ricardo, 521 - Bloco B - 2º. Andar - Jd. Aquarius
12246-870 - São José dos Campos - SP Brazil

4. Manufacturer: EMBRAER
Empresa Brasileira de Aeronáutica SA
Av. Brig. Faria Lima. 2170
12227-901 São Jose dos Campos SP Brasil

5. ANAC Certification Application Date: 27 May 1999

6. JAA Validation Application Date:
   (Reference date for EASA validation) 21 May 1999

7. ANAC Type Certification Date: 19 February 2004

8. EASA Type Validation Date:
   (JAA recommendation) 20 February 2004

II. Certification Basis

1. ANAC Type Certification Data Sheet No.: 2003T05

2. ANAC Certification Basis:

   RBHA 25 - Requisitos de Aeronavegabilidade. Avioes de Transporte (Airworthiness Standards, Transport Category Airplanes), corresponding to U.S. FAR part 25, including amendments 25-1 through 25-109, except section 25.981(c) of Amdt. 25-102, Amdt. 25.106 and section 25.735 (h) of Amdt. 25-107. (Reference to FCAR HT-01)

3. EASA Airworthiness Requirements

   3.1. Applicable JAR Requirements at the Reference Date:

      JAR-25 Change 14 (Effective 27 May 1994)
      Orange Paper OP96/1
      JAR-AWO Change 2
      JAA Temporary Guidance Leaflet No. 6 (RVSM)
      JAA Temporary Guidance Leaflet No.8 (ACAS II)
SECTION 1: EMBRAER ERJ 170-100 VARIANT - continued

The following NPAs have been applied:

NPA 25 B, D, G-244  Accelerate Stop Distances and Related Performances
NPA 25B215    Stall/Stall Warning Speeds and Manoeuvre Capability
NPA 25B-238    Flap Gates
NPA AWO 2      All Weather Operations
NPA AWO 5      All Weather Operations
NPA 25B, C, D-236  Flutter, Deformation and Fail Safe Criteria
NPA 25 G-255   Aircraft Flight manual
NPA 25C-260   Loads Harmonisation
NPA 25C-271   Fatigue Scatter factors
NPA 25D-279   Shock Absorption Tests
NPA 25C-282   Amendments to Gust Conditions
NPA 25E,J-287  Engine Rotor Burst

3.2. Reversions:

None Identified

4. Special Conditions

The following Special Conditions have been applied.

JAA/170/SC/CRI B-12  Angle of Attack Limiting Function
JAA/170/SC/CRI B-15  Electronic Flight Control System: Control Surface Position Awareness
JAA/170/SC/CRI C-03  Interaction of systems and Structure
JAA/170/SC/CRI C-15  Structural/Control Jam Conditions
JAA/170/SC/CRI C-17  Static Strength Criteria for Engine Failure Loads
JAA/170/SC/CRI D-02  Towbarless Towing
JAA/170/SC/CRI E-08  Engine Sustained Imbalance
JAA/170/SC/CRI E-10  Uncontrolled Thrust Increase
JAA/170/SC/CRI F-01  Protection from the effects of HIRF
JAA/170/SC/CRI F-14  Air Data System (Smart Probes)
JAA/170/SC/CRI F-16  IRS: Align in Motion
EASA/170/SC/CRI 170/H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS

5. Exemptions

No exemptions have been granted.

6. Equivalent Safety Findings

The following Equivalent Safety Findings have been granted:

JAA/170/ES/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 Amdt 2
SECTION 1: EMBRAER ERJ 170-100 VARIANT - continued

JAA/170/ES/CRI C-04 Vibration Buffet and Aeroelastic Stability
Equivalent Safety with JAR 25.629 and NPA 25BCD-236
JAA/170/ES/CRI C-09 Design Diving Speeds
Equivalent Safety with JAR 25.335(b)(2)
JAA/170/ES/CRI C-21 Fuel Tank Crashworthiness
Equivalent Safety with JAR 25.963(d) and JAR 25.561
JAA/170/ES/CRI D-05 Hydraulic Systems
Equivalent Safety with JAR 25.1435
JAA/170/ES/CRI D-06 Wheels and Brakes
Equivalent Safety with JAR 25.731 and JAR 25.735
JAA/170/ES/CRI D-07 Fuselage Doors
Equivalent Safety with JAR 25.783
JAA/170/ES/CRI D-17 Type and Number of Passenger Emergency Exits
JAA/170/ES/CRI D-18 Packs Off Take Off
Equivalent Safety with JAR 25.831(a)
JAA/170/ES/CRI D-19 Reinforced Security Cockpit Door
JAA/170/ES/CRI E-02 Thrust Reverser Operation
Equivalent Safety with JAR 25.933(a)
JAA/170/ES/CRI E-09 Fan Case Fire Zone
Equivalent Safety with JAR 25.1181(a)(6)
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 F-30 Position Light Intensities
Equivalent Safety with JAR 25.1389(b), 25.1391, 25.1393, 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

7. Environmental Protection Standards

8. 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 Certificate
2. Type Design Definition: Defined by Report 170-100TDSD_01 “Type Design Standard Document” at Revision B
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. Equipment: Required equipment is listed in Embraer Document Reference 170CCC003: Embraer ERJ 170 Build Standard for Airplanes to be Delivered to European Countries

5. Dimensions

   Length 29.9 m (98 ft 1 in)
   Span 26.0 m (85 ft 4 in)
   Height 9.82 m (32 ft 3 in)
   Wing Area 72.72 m² (783 ft²)

6. Engines: Two General Electric CF-34-8E5 or -8E5A1 Turbofan Engines

   Limitations: See JAA Engine Type Data Sheet No. JAA/E/00-23 or Airplane Flight Manual

7. Auxiliary Power Unit: Hamilton Sundstrand APS2300

   Limitations: Refer to the APU TCDS / TSO

8. Propellers: N/A

9. Fluids (Fuel, Oil, Additives, Hydraulics): Refer to applicable approved manuals

10. Fluid Capacities: Refer to applicable approved manuals


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

13. All Weather Capability: Cat II/Cat III optional *

   * If post-mod SB 170-22-0001 or equivalent manufacturer production modification
SECTION 1: EMBRAER ERJ 170-100 VARIANT - continued

14. Maximum Certified Masses:

<table>
<thead>
<tr>
<th>Phase</th>
<th>170-100 LR</th>
<th>170-100 STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi and Ramp</td>
<td>82364 lb. 37360 kg</td>
<td>79696 lb 36150 kg</td>
</tr>
<tr>
<td></td>
<td>38760 kg (6)</td>
<td>38760 kg (6)</td>
</tr>
<tr>
<td>Take-off</td>
<td>82011 lb. 37200 kg</td>
<td>79344 lb 35990 kg</td>
</tr>
<tr>
<td></td>
<td>(1) 34850 kg</td>
<td>(2) 38600 kg</td>
</tr>
<tr>
<td></td>
<td>(3) 35990 kg</td>
<td>(4) 34000 kg</td>
</tr>
<tr>
<td></td>
<td>(5) 38600 kg</td>
<td>(6) 38760 kg</td>
</tr>
<tr>
<td></td>
<td>(7) 34000 kg</td>
<td>(8) 33300 kg</td>
</tr>
<tr>
<td>Landing</td>
<td>72310 lb. 32800 kg</td>
<td>72310 lb 32800 kg</td>
</tr>
<tr>
<td></td>
<td>33300 kg (3)(6)</td>
<td>33300 kg (3)(6)</td>
</tr>
<tr>
<td>Zero Fuel</td>
<td>65256 lb. 29600 kg</td>
<td>65256 lb 29600 kg</td>
</tr>
<tr>
<td></td>
<td>30900 kg (6)</td>
<td>30900 kg (6)</td>
</tr>
</tbody>
</table>

(1) Standard weight or if post-mod SB 170-00-0006 is applied
(2) If post-mod SB 170-00-0005 or if post-mod SB 170-00-0015
(3) If post-mod SB 170-00-0003
(4) If post-mod SB 170-00-0014
(5) For airplanes S/N 17000059, 17000065 and on or post-mod SB 170-00-0024
(6) If post-mod SB 170-00-0016
(7) If post-mod SB 170-00-0022
(8) For airplanes Post-Mod. SB 170-00-0055 or equipped with an equivalent modification factory incorporated.


16. Datum: A perpendicular plane to the fuselage center line located 11650.0 mm in front of the Wing Stub Spar 1. This spar is located 372.6 mm forward of the wing jacking points.

17. Mean Aerodynamic Chord: 3.194 m (10 ft. 6 in.)


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

20. Maximum Seating Capacity: 80 Passengers

21. Exits:

<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 750 mm (w) x 1821 mm (h)</td>
</tr>
<tr>
<td>2</td>
<td>Main Aft LH</td>
<td>1 Type I 635 mm (w) x 1801 mm (h)</td>
</tr>
<tr>
<td>3</td>
<td>Service (Fwd, RH)</td>
<td>1 Type I 611 mm (w) x 1368 mm (h)</td>
</tr>
<tr>
<td>4</td>
<td>Service (Aft RH)</td>
<td>1 Type 1 632 mm (w) x 1381 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 |
SECTION 1: EMBRAER ERJ 170-100 VARIANT - continued

22. 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>8.7 m³ (306 ft³)</td>
</tr>
<tr>
<td>Rear Aft (Underfloor)</td>
<td>C</td>
<td>5.8 m³ (204 ft³)</td>
</tr>
</tbody>
</table>

23. Wheels and Tyres

Nose Assy (Qty 2) Tyre/Wheel: 24 x 7.7 12PR
Main Assy (Qty 4) Tyre/Wheel: H38 x 13.0-18 18PR or 20PR
Speed Rating: 225 mph

IV. Operating and Servicing Instructions


2. Mandatory Maintenance Instructions:

   2.1 Aircraft Maintenance Manual (Customised to aircraft configuration)

   2.2 Maintenance Review Board Report Ref: MRB 1621, Revision 1 or Subsequent JAA approved revision

   2.3 Airworthiness Limitations and Certification Maintenance Requirements:

       MRB Report: Appendix A Part 1 (Certification Maintenance Requirements)
       Appendix A Part 2 (Structural Inspection Fatigue Limits ALI)
       Appendix A Part 3 (Fuel System Limitation Items - FSL)
       Appendix A Part 4 (Airframe Life Limits – ALL)

   2.4 Structural repair manual SRM-1583 is applicable.

3. Service Letters and Service Bulletins as published by Embraer and approved by ANAC.
V. Operational Suitability Data (OSD)

The Operational Suitability Data elements listed below are approved by the European Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.001 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 170-100 models aircraft is "EMB170". The ERJ 170 and the ERJ 190 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 170/175 aircraft models are determined to be variants to the Embraer 190/195 aircraft models.

VI. Notes

Reserved
SECTION 2: EMBRAER ERJ 170-200 VARIANT

I. General

1. Type/ Model/ Variant: Embraer ERJ 170-200
2. Performance Class: A
3. Certifying Authority: Agência Nacional De Aviação Civil - ANAC
   Gerência Geral de Certificação de Produtos Aeronáuticos
   Av. Cassiano Ricardo, 521 - Bloco B - 2º. Andar - Jd. Aquarius
   12246-870 - São José dos Campos - SP Brazil
4. Manufacturer: EMBRAER
   Empresa Brasileira de Aeronáutica SA
   Av. Brig. Faria Lima. 2170
   12227-901 São José dos Campos SP Brasil
5. ANAC Certification Application Date: 01 September 2000
6. JAA Validation Application Date: 01 September 2000
   (Reference date for EASA validation)
7. ANAC Type Certification Date: 22 December 2004
8. EASA Type Validation Date: 07 January 2005
   (JAA recommendation)

II. Certification Basis

1. ANAC Type Certification Data Sheet No.: 2003T05 (Issue 03)
2. ANAC Certification Basis:
   
   RBHA 25 - Requisitos de Aeronaves de Transporte (Airworthiness Standards Transport Category Airplanes), corresponding to U.S. FAR part 25, including amendments 25-1 through 25-109, except section 25.981(c) of Amdt. 25-102, Amdt. 25.106 and section 25.735 (h) of Amdt. 25-107. (Reference to FCAR HT-01).

3. EASA Airworthiness Requirements

   3.3. Applicable JAR Requirements at the Reference Date:

   JAR-25 Change 14 (Effective 27 May 1994)
   Orange Paper OP96/1
   JAR-AWO Change 2
The following NPAs have been applied:

NPA 25 B, D, G-244  Accelerate Stop Distances and Related Performances
NPA 25B215    Stall/Stall Warning Speeds and Manoeuvre Capability
NPA 25B-238    Flap Gates
NPA AWO 5      All Weather Operations
NPA 25B, C, D-236 Flutter, Deformation and Fail Safe Criteria
NPA 25 G-255   Aircraft Flight manual
NPA 25C-260    Loads Harmonisation
NPA 25C-271    Fatigue Scatter factors
NPA 25D-279    Shock Absorption Tests
NPA 25C-282    Amendments to Gust Conditions
NPA 25E, J-287 Engine Rotor Burst

3.4. Reversions:

None Identified

4. Special Conditions

The following Special Conditions have been applied.

JAA/170/SC/CRI B-12  Angle of Attack Limiting Function
JAA/170/SC/CRI B-15  Electronic Flight Control System: Control Surface Position Awareness
JAA/170/SC/CRI C-03  Interaction of systems and Structure
JAA/170/SC/CRI C-15  Structural/Control Jam Conditions
JAA/170/SC/CRI C-17  Static Strength Criteria for Engine Failure Loads
JAA/170/SC/CRI D-02  Towbarless Towing
JAA/170/SC/CRI E-08  Engine Sustained Imbalance
JAA/170/SC/CRI E-10  Uncontrolled Thrust Increase
JAA/170/SC/CRI F-01  Protection from the effects of HIRF
JAA/170/SC/CRI F-14  Air Data System (Smart Probes)
JAA/170/SC/CRI F-16  IRS: Align in Motion
EASA/170/SC/CRI 170/H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS

5. Exemptions

No exemptions have been granted.

6. Equivalent Safety Findings

The following Equivalent Safety Findings have been granted:

JAA/170/ES/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 Amdt 2
SECTION 2: EMBRAER ERJ 170-200 VARIANT - continued

JAA/170/ES/CRI C-04  Vibration Buffet and Aeroelastic Stability  
Equivalent Safety with JAR 25.629 and NPA 25BCD-236

JAA/170/ES/CRI C-09  Design Diving Speeds  
Equivalent Safety with JAR 25.335(b)(2)

JAA/170/ES/CRI C-21  Fuel Tank Crashworthiness  
Equivalent Safety with JAR 25.963(d) and JAR 25.561

JAA/170/ES/CRI D-05  Hydraulic Systems  
Equivalent Safety with JAR 25.1435

JAA/170/ES/CRI D-06  Wheels and Brakes  
Equivalent Safety with JAR 25.731 and JAR 25.735

JAA/170/ES/CRI D-07  Fuselage Doors  
Equivalent Safety with JAR 25.783

JAA/170/ES/CRI D-17  Type and Number of Passenger Emergency Exits  

JAA/170/ES/CRI D-18  Packs Off Take Off  
Equivalent Safety with JAR 25.831(a)

JAA/170/ES/CRI D-19  Reinforced Security Cockpit Door  

JAA/170/ES/CRI E-02  Thrust Reverser Operation  
Equivalent Safety with JAR 25.933(a)

JAA/170/ES/CRI E-09  Fan Case Fire Zone  
Equivalent Safety with JAR 25.1181(a)(6)

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 F-30  Position Light Intensities  
Equivalent Safety with JAR 25. 1389(b), 25.1391, 25.1393, 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

CRI F-48  LED position lights system overlap exceedance  
Equivalent safety with JAR 25 Amdt 14 + OP 25/96/1, §25.1389(b)(3) and 25.1395 for aircraft embodied with Enhanced Wing Tip (ref. DCA 0170-000-00088-2012)

7. Environmental Protection Standards

8. 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 Certificate

2. Type Design Definition: Defined by Report 170-200TDSD “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. Equipment: Required equipment is listed in Embraer Document Reference 170CCC003: Embraer ERJ 170 Build Standard for Airplanes to be Delivered to European Countries” Issue A or later is applicable to ERJ 170-200.

5. Dimensions
Length 31.68 m (103 ft 11 in)
Span 26.0 m (85 ft 4 in)
Height 9.82 m (32 ft 3 in)
Wing Area 72.72 m² (783 ft²)

6. Engines: Two General Electric CF-34-8E5 or -8E5A1 Turbofan Engines

Limitations: See JAA Engine Type Data Sheet No. JAA/E/00-23 or Airplane Flight Manual

7. Auxiliary Power Unit: Hamilton Sundstrand APS2300
Limitations: Refer to the APU TCDS / TSO

8. Propellers: N/A

9. Fluids (Fuel, Oil, Additives, Hydraulics): Refer to applicable approved manuals

10. Fluid Capacities: Refer to applicable approved manuals


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

13. All Weather Capability: Cat II/Cat III optional *
   * If post-mod SB 170-22-0004 or equivalent manufacturer production modification
14. Maximum Certified Masses:

<table>
<thead>
<tr>
<th>Phase</th>
<th>170-200 LR</th>
<th>170-200 STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi and Ramp</td>
<td>85870 lb 38950 kg (40530 kg)</td>
<td>83026 lb 37660 kg (40530 kg)</td>
</tr>
<tr>
<td>Take-off</td>
<td>85517 lb 38790 kg (40370 kg)</td>
<td>82673 lb 37500 kg (40370 kg)</td>
</tr>
<tr>
<td>Landing</td>
<td>74957 lb 34000 kg (34100 kg)</td>
<td>74957 lb 34000 kg (34100 kg)</td>
</tr>
<tr>
<td>Zero Fuel</td>
<td>74957 lb 31700 kg (32000 kg)</td>
<td>69886 lb 31700 kg (32000 kg)</td>
</tr>
</tbody>
</table>

(1) If post-mod SB 170-00-0034
(2) For airplanes Post-Mod. SB 170-00-0016 or equipped with an equivalent modification factory incorporated.
(3) For airplanes Post-Mod. SB 170-00-0037 or equipped with an equivalent modification factory incorporated.
(4) For airplanes Post-Mod. SB 170-00-0039 or equipped with an equivalent modification factory incorporated.
(5) For airplanes Post-Mod. SB 170-00-0049, SB 170-00-0050, SB 170-00-0051 and SB 170-00-0049 or equipped with an equivalent modification factory incorporated.


16. Datum: A perpendicular plane to the fuselage center line located 11650,0 mm in front of the Wing Stub Spar 1. This spar is located 372,6 mm forward of the wing jacking points.

17. Mean Aerodynamic Chord: 3.194 m (10ft. 6 in.)


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

20. Maximum Seating Capacity: 88 Passengers

21. 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 1821 mm (h)</td>
</tr>
<tr>
<td>2 Main Aft LH</td>
<td>1 Type I</td>
<td>635 mm (w) x 1801 mm (h)</td>
</tr>
<tr>
<td>3 Service (Fwd, RH)</td>
<td>1 Type I</td>
<td>611 mm (w) x 1368 mm (h)</td>
</tr>
<tr>
<td>4 Service (Aft RH)</td>
<td>1 Type 1</td>
<td>632 mm (w) x 1381 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 |
22. 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>10.06 m³ (355 ft³)</td>
</tr>
<tr>
<td>Rear Aft (Underfloor)</td>
<td>C</td>
<td>7.19 m³ (254 ft³)</td>
</tr>
</tbody>
</table>

23. Wheels and Tyres

- Nose Assy (Qty 2) Tyre/Wheel: 24 x 7.7 12PR
- Main Assy (Qty 4) Tyre/Wheel: H38 x 13.0-18 18PR or 20PR
- Speed Rating: 225 mph

IV. Operating and Servicing Instructions


2. Mandatory Maintenance Instructions:

   2.1 Aircraft Maintenance Manual (Customised to aircraft configuration)

   2.2 Maintenance Review Board Report Ref: MRB 1621, Revision 2 or Subsequent JAA approved revision

   2.3 Airworthiness Limitations and Certification Maintenance Requirements:

       MRB Report:  
       - Appendix A Part 1 (Certification Maintenance Requirements)  
       - Appendix A Part 2 (Structural Inspection Fatigue Limits ALI)  
       - Appendix A Part 3 (Fuel System Limitation Items - FSL)  
       - Appendix A Part 4 (Airframe Life Limits – ALL)

   2.4 Structural repair manual SRM-1802 is applicable.

3. Service Letters and Service Bulletins as published by Embraer and approved by ANAC.
V. Operational Suitability Data (OSD)

The Operational Suitability Data elements listed below are approved by the European Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.001 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 170-200 models aircraft is "EMB170". The ERJ 170 and the ERJ 190 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 170/175 aircraft models are determined to be variants to the Embraer 190/195 aircraft models.

VI. Notes

The Model ERJ 170-100 XX is often referred to in Embraer marketing literature as the “Embraer 170 XX”, with the appropriate model (LR, STD, etc.) substituted for the “XX”. The Model ERJ 170-200 XX is often referred to in Embraer marketing literature as the “Embraer 175 XX”, with the appropriate model (LR, STD, etc.) substituted for the “XX”. These names are strictly marketing designations and are not part of the official model designations.
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

ACAS Airborne Collision Avoidance System
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 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
OSD Operational Suitability Data
RVSM Reduced Vertical Separation Minima
S/N Serial Number
SB Service Bulletin
SC Special Condition
TC Type Certificate
TCDS Type Certificate Data Sheet
TSO Technical Standards Order

II. Type Certificate Holder Record

EMBRAER S.A.
Empresa Brasileira de Aeronáutica SA
Av. Brig. Faria Lima. 2170
12227-901 São Jose dos Campos SP
Brasil
### III. Change Record

Starting with Issue 06

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC issue</th>
</tr>
</thead>
</table>
| Issue 06 | 12/10/2011 | Section 1.II.4 and 2.II.4: Special Condition added - EASA/170/SC/CRI 170/H-01 for ICA on EWIS  
Section 1.II.6 and 2.II.6: Update ESF JAA/170/ES/CRI B-17  
Section 2.III.14: Take-off Weight variant and Note added for 170-200STD  
Section 2.III.20: Correction Maximum Seating Capacity  
Section 2.V.: Note added  
Editorial changes and new TCDS layout | Issue 2 Rev 1, 13/03/2009                                                                                     |
| Issue 07 | 20/12/2011 | Section 1.III.14: Maximum Certified Masses 170-100, Note 5 changed  
Section 2.III.14: Weight variants added for 170-200, Note 2 added  
Editorial corrections                                                                                       | Issue 2 Rev 1, 13/03/2009                                                                                     |
| Issue 08 | 16/10/2014 | Section 2.II.6: CRI F-48 ESF added  
Section 2.III.14: Weight variants added for 170-200 STD, Notes 3 & 4 added                                                                 | Issue 2 Rev 1, 13/03/2009                                                                                     |
| Issue 09 | 10/12/2015 | Section 1.II.8: EASA Operational Suitability Data  
Section 1.V: Operational Suitability Data (OSD)  
Section 2.II.8: EASA Operational Suitability Data  
Section 2.V: Operational Suitability Data (OSD)                                                                 | Issue 2 Rev 1, 13/03/2009                                                                                     |
| Issue 10 | 04/03/2016 | Section 2.III.14: Maximum Certified Masses  
- Reduced MTOW introduced in accordance with DCA 0170-000-00199-2015/EASA Rev.-                                                                 | Issue 2 Rev 1, 13/03/2009                                                                                     |
| Issue 11 | 26/07/2016 | Section 1.III.14: Maximum Certified Masses  
- Reduced MTOW introduced in accordance with DCA 0170-000-00009-2016/EASA Rev. A                                                                                  | Issue 2 Rev 1, 13/03/2009                                                                                     |