737
Airplane Characteristics for Airport Planning

Boeing Commercial Airplanes
## 737 AIRPLANE CHARACTERISTICS

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1.0 SCOPE AND INTRODUCTION

1.1 Scope

1.2 Introduction

1.3 A Brief Description of the 737 Family of Airplanes
1.0 SCOPE AND INTRODUCTION

1.1 Scope

This document provides, in a standardized format, airplane characteristics data for general airport planning. Since operational practices vary among airlines, specific data should be coordinated with the using airlines prior to facility design. Boeing Commercial Airplanes should be contacted for any additional information required.

Content of the document reflects the results of a coordinated effort by representatives from the following organizations:

- Aerospace Industries Association
- Airports Council International - North America
- Air Transport Association of America
- International Air Transport Association

The airport planner may also want to consider the information presented in the "Commercial Aircraft Design Characteristics – Trends and Growth Projections," available from the US AIA, 1250 Eye St., Washington DC 20005, for long-range planning needs. This document is updated periodically and represents the coordinated efforts of the following organizations regarding future aircraft growth trends:

- International Coordinating Council of Aerospace Industries Associations
- Airports Council International - North America
- Air Transport Association of America
- International Air Transport Association
1.2 Introduction

This document conforms to NAS 3601. It provides characteristics of the Boeing Model 737 airplanes for airport planners and operators, airlines, architectural and engineering consultant organizations, and other interested industry agencies. Airplane changes and available options may alter model characteristics. The data presented herein reflect typical airplanes in each model category.

For additional information contact:

Boeing Commercial Airplanes
P.O. Box 3707
Seattle, Washington 98124-2207
U.S.A.

Attention: Manager, Airport Technology
Mail Code 67-KR
1.3 A Brief Description of the 737 Family of Airplanes

The 737 is a twin-engine airplane designed to operate over short to medium ranges from sea level runways of less than 6,000 ft (1,830 m) in length.

Significant features of interest to airport planners are described below:

- Underwing-mounted engines provide eye-level assessability. Nearly all system maintenance may be performed at eye level.
- Optional airstairs allow operation at airports where no passengers loading bridges or stairs are available.
- Auxiliary power unit can supply energy for engine starting, air conditioning, and electrical power while the airplane is on the ground or in flight.
- Servicing connections allow single-station pressure fueling and overwing gravity fueling.
- All servicing of the 737 is accomplished with standard ground equipment.

737-100

The 737-100 is the standard short body version of the 737 family. It is 94 ft (28.63 m) long from nose to the tip of the horizontal stabilizer.

737-200

The 737-200 is an extended body version of the 737 family and is 100 ft 2 in (30.53 m) long. Two sections were added to the 737-100 fuselage; a 36-in section forward of the wing and a 40-in section aft of the wing. All other dimensions are the same as the 737-100.

Advanced 737-200

The advanced 737-200 is a high gross weight airplane that has significant improvements over the 737-200, which result in improved performance, e.g. longer range, greater payload, and shorter runway requirement. The advanced 737-200 has dimensions identical to the 737-200.
737-200C, Adv 737-200C

The convertible version differs from the passenger model in that it has an 86 by 134-in (2.18 by 3.40 m) main deck cargo door, increased floor strength, and additional seat tracks. Either of two cargo handling systems, the cargo (C) or quick change (QC) can be installed to allow conversion from a passenger configuration to a cargo or a mixed passenger/cargo configuration, and vice-versa.

737-200 Executive Airplane

The 737-200 and Adv 737-200 were also delivered with an executive interior. The interior comes in a variety of configurations depending on customer requirements. Some airplanes were delivered without any interior furnishings for customer installation of special interiors.

737-300

The 737-300 is a second-generation stretched version of the 737 family of airplanes and is 109 ft 7 in long. Two sections were added to the 737-200 fuselage; a 44-in section forward of the wing and a 60-in section aft of the wing. Wing and stabilizer spans are also increased. The 737-300 incorporates new aerodynamic and engine technologies in addition to the increased payload and range. The -300 can seat as many as 149 passengers in an all-economy configuration.

737-300 With Winglets

Winglets are installed on some 737-300 airplanes as an after-market airline option. Data for this airplane is included for dimensional information only.

737-400

The 737-400 is 120 inches longer that the -300. Two sections were added to the -300 fuselage; a 72-in section forward of the wing and a 48-in section aft of the wing. The -400 can seat as many as 168 passengers in all-economy configuration.

737-500

The 737-500 is the shortened version of the 737-300. The -500 is 101 ft 9 in long and can seat up to 132 passengers in an all-economy configuration.
737-600

The 737-600, along with the 737-700, -800, and -900 is the latest derivative in the 737 family of airplanes. This airplane has the same fuselage as the 737-500 and fitted with new wing, stabilizer, and tail sections. This enables the airplane to fly over longer distances. The 737-600 is 102 ft 6 in long and can carry up to 130 passengers in an all-economy configuration.

737-700

The 737-700 has the same fuselage as the 737-300 and is fitted with the new wing, stabilizer, and tail sections. The 737-700 is 110 ft 4 in long and can carry up to 148 passengers in an all-economy configuration.

737-800

The 737-800 has a slightly longer fuselage than the 737-400 and is fitted with the new wing, stabilizer, and tail sections. The 737-800 is 129 ft 6 in long and can carry up to 184 passengers in an all-economy configuration.

737-900

The 737-900 is a derivative of the -800 and is 96 inches longer that the -800. Two sections were added to the -800 fuselage; a 54-in section forward of the wing and a 42-in section aft of the wing. The -900 can seat as many as 189 passengers in all-economy configuration.

737 BBJ

The Boeing Business Jet is a 737-700 airplane that is delivered without any interior furnishings. The customer installs specific interior configurations. This 737-700 model airplane is equipped with a 737-800 landing gear configuration and has weight and performance capabilities as the -800. One unique feature of the 737 BBJ is the addition of winglets to provide improved cruise performance capabilities.

737 BBJ2

The Boeing Business Jet Two is a 737-800 airplane that is delivered without any interior furnishings. The customer installs specific interior configurations. Like the 737 BBJ, the BBJ2 is equipped with winglets to provide improved cruise performance capabilities.
737-600, -700, -800, -900 With Winglets

The 737-700, -800, and -900 airplanes are also delivered with winglets. Interior configurations are similar to the base airplane models. Like the BBJ airplanes, the winglets provide improved cruise performance capabilities. Winglets are installed on some 737-600 airplanes as an after-market airline option. Data for this airplane is included for dimensional information only.

737-900ER, -900ER With Winglets

The 737-900ER airplanes are long-range derivatives of the 737-900 and -900 with winglets and designed for higher capacity seating. Additional exit doors are installed aft of the wing to provide exit capability for the additional passenger capacity. The 737-900ER and -900ER with winglets are capable of carrying up to 215 passengers with the additional exit doors.

Engines

The 737-100 and -200 airplanes were equipped with JT8D-7 engines. The -9, -5, -17, and -17R engines reflect successive improvements in nose reduction, thrust, and maintenance costs. Other optional engines include the -9A, -15A, -17A, and -17AR.

The 737-300, -400, and -500 airplanes are equipped with new high bypass ratio engines (CFM56-3) that are economical to operate and maintain. These are quiet engines that meet FAR 36 Stage 3 and ICAO Annex 16 Chapter 3 noise standards. With these higher thrust engines and modified flight control surfaces, runway length requirement is reduced.

The 737-600, -700, -800, and -900 airplanes are equipped with advanced derivatives of the 737-300, -400, and -500 engines. These engines (CFM56-7) generate more thrust and exhibit noise characteristics that are below the current noise standards.

737 Gravel Runway Capability

The optional gravel runway capability allows the 737-200 to operate on remote unimproved runways. The gravel kit includes gravel deflectors for the nose and main gears, vortex dissipators for each engine nacelle, and special protective finishes. Low-pressure tires are also required for operation on low strength runways.

The special environment of the gravel runway dictates changes in operating procedures and techniques for maximum safety and economy. Boeing Commercial Airplanes and the FAA have specified procedural changes for operating the 737-200 on gravel runways. Organizations interested in operational details are referred to the using airline or to Boeing.
Passenger Cabin Interiors

Early 737s were equipped with hatrack-type overhead stowage. Later models were equipped with a “wide-body look” interior that incorporates stowage bins in the sidewall and ceiling panels to simulate a superjet interior. More recent configurations include carryall compartments and the advanced technology interior. These interiors provide more stowage above the passenger seats.

Integral Airstairs

Optional airstairs allow passenger loading and unloading at airports where there are no loading bridges or stairs. The forward airstairs are mounted under the cabin floor just below the forward entry door. The aft airstairs are mounted on a special aft entry door and are deployed when the door is opened. The aft airstairs option is available only on the 737-100 and 737-200 airplanes.

Auxiliary Fuel Tanks

Optional auxiliary fuel tanks installed in the lower cargo compartments, provide extra range capability. Although this option increases range, it decreases payload.

Document Page Applicability

Several configurations have been developed for the 737 family of airplanes to meet varied airline requirements. Configurations shown in this document are typical and individual airlines may have different combinations of options. The airlines should be consulted for specific airplane configuration.

Document Applicability

This document contains information on all 737 models.

Information on the 737-100, -200, 200C, Adv 737-200, and Adv 737-200C formerly contained in Document D6-58325, Revision D, 737 Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325 is superseded and should be discarded.

Information on the 737-300, -400, and -500 model airplanes formerly contained in Document D6-58325-2 Revision A, 737-300/400/500 Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-2 is superseded and should be discarded.

Information on the 737-600, -700, -800, and -900 model airplanes formerly contained in Document D6-58325-3, 737-600/700/800/900 Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-3 is superseded and should be discarded.
Information on the 737-700, -800, and -900 model airplanes with winglets formerly contained in Document D6-58325-5, 737-700/800/900 (With Winglets) Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-5 is superseded and should be discarded.

Information on the Boeing Business Jet airplanes formerly contained in Document D6-58325-4, 737-BBJ Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-4 is superseded and should be discarded.
2.0 AIRPLANE DESCRIPTION

2.1 General Characteristics
2.2 General Dimensions
2.3 Ground Clearances
2.4 Interior Arrangements
2.5 Cabin Cross Sections
2.6 Lower Cargo Compartments
2.7 Door Clearances
2.0 AIRPLANE DESCRIPTION

2.1 General Characteristics

**Maximum Design Taxi Weight (MTW).** Maximum weight for ground maneuver as limited by aircraft strength and airworthiness requirements. (It includes weight of taxi and run-up fuel.)

**Maximum Design Takeoff Weight (MTOW).** Maximum weight for takeoff as limited by aircraft strength and airworthiness requirements. (This is the maximum weight at start of the takeoff run.)

**Maximum Design Landing Weight (MLW).** Maximum weight for landing as limited by aircraft strength and airworthiness requirements.

**Maximum Design Zero Fuel Weight (MZFW).** Maximum weight allowed before usable fuel and other specified usable agents must be loaded in defined sections of the aircraft as limited by strength and airworthiness requirements.

**Operating Empty Weight (OEW).** Weight of structure, powerplant, furnishing systems, unusable fuel and other unusable propulsion agents, and other items of equipment that are considered an integral part of a particular airplane configuration. Also included are certain standard items, personnel, equipment, and supplies necessary for full operations, excluding usable fuel and payload.

**Maximum Payload.** Maximum design zero fuel weight minus operational empty weight.

**Maximum Seating Capacity.** The maximum number of passengers specifically certificated or anticipated for certification.

**Maximum Cargo Volume.** The maximum space available for cargo.

**Usable Fuel.** Fuel available for aircraft propulsion.
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NOTE: (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

2.1.1 GENERAL CHARACTERISTICS
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<td>MAX DESIGN TAXI WEIGHT</td>
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<td>MAX DESIGN TAKEOFF WEIGHT</td>
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<td>MAX DESIGN LANDING WEIGHT</td>
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<td>MAX DESIGN ZERO FUEL WEIGHT</td>
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<td>POUNDS</td>
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<td>27,170 27,624 27,579 28,032 27,125</td>
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<td>POUNDS</td>
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<td>ALL-ECONOMY</td>
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<td>MAX CARGO VOLUME - LOWER DECK</td>
<td>CUBIC FEET</td>
<td>875 875 875 875 875</td>
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<td>USABLE FUEL</td>
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<td>3,460 4,190 4,230 4,780 4,780</td>
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<td>13,096 15,859 16,011 18,092 18,092</td>
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<td>POUNDS</td>
<td>23,182 28,073 28,341 32,026 32,026</td>
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<td>10,515 12,734 12,855 14,527 14,527</td>
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**NOTE:** (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
### MODEL 737-200

#### CHARACTERISTICS

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<td><strong>Max Design Taxi Weight</strong></td>
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<td>110,000</td>
<td>116,000</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>49,896</td>
<td>52,617</td>
</tr>
<tr>
<td><strong>Max Design Takeoff Weight</strong></td>
<td>Pounds</td>
<td>109,000</td>
<td>115,500</td>
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<tr>
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<td>Kilograms</td>
<td>49,442</td>
<td>52,390</td>
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<tr>
<td><strong>Max Design Landing Weight</strong></td>
<td>Pounds</td>
<td>98,000</td>
<td>103,000</td>
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<tr>
<td></td>
<td>Kilograms</td>
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<td>46,720</td>
</tr>
<tr>
<td><strong>Max Design Zero Fuel Weight</strong></td>
<td>Pounds</td>
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<td>95,000</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
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<td><strong>Operating Empty Weight (1)</strong></td>
<td>Pounds</td>
<td>61,100</td>
<td>54,900</td>
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<td>Kilograms</td>
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<td><strong>Max Structural Payload</strong></td>
<td>Pounds</td>
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<td>28,200</td>
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<td>Kilograms</td>
<td>12,202</td>
<td>12,791</td>
</tr>
<tr>
<td><strong>Seating Capacity</strong></td>
<td>Two-Class</td>
<td>110: 8 First Class and 102 Economy (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All-Economy</td>
<td>117 at Six Abreast (2) ; FAA Exit Limit: 136</td>
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</tr>
<tr>
<td><strong>Max Cargo Volume - Main Deck</strong></td>
<td>Cubic Feet</td>
<td>2,760 (3)</td>
<td>2,760 (3)</td>
</tr>
<tr>
<td></td>
<td>Cubic Meters</td>
<td>78.2 (3)</td>
<td>78.2 (3)</td>
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<tr>
<td><strong>Max Cargo Volume - Lower Deck</strong></td>
<td>Cubic Feet</td>
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<td>875</td>
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<td></td>
<td>Cubic Meters</td>
<td>24.8</td>
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<tr>
<td><strong>Usable Fuel</strong></td>
<td>US Gallons</td>
<td>4,200</td>
<td>4,780</td>
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<td></td>
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<td>18,092</td>
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<tr>
<td></td>
<td>Pounds</td>
<td>28,140</td>
<td>32,026</td>
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<td>Kilograms</td>
<td>12,764</td>
<td>14,527</td>
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</table>

#### Notes:

1. Operating empty weight for baseline mixed class configuration.
2. Consult with airline for specific weights and configurations.
3. Airplane in all-Pasenger configuration
4. Airplane in all-Cargo configuration with the "QC" cargo system
5. 88 x 125 in (2.24 x 3.18 M) pallets

### 2.1.3 General Characteristics

*Model 737-200, Convertible and Executive Airplanes*
<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL ADVANCED 737-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX DESIGN TAXI WEIGHT</td>
<td>POUNDS</td>
<td>116,000 117,500 120,000 125,000 128,600</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>52,617 53,298 54,432 56,700 58,333</td>
</tr>
<tr>
<td>MAX DESIGN TAKEOFF WEIGHT</td>
<td>POUNDS</td>
<td>115,500 117,000 119,500 124,500 128,100</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>52,390 53,071 54,205 56,473 58,106</td>
</tr>
<tr>
<td>MAX DESIGN LANDING WEIGHT</td>
<td>POUNDS</td>
<td>103,000 105,000 105,000 107,000 107,000</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>46,720 47,628 47,628 48,535 48,535</td>
</tr>
<tr>
<td>MAX DESIGN ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>95,000 95,000 95,000 95,000 95,000</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>43,092 43,092 43,092 43,092 43,092</td>
</tr>
<tr>
<td>OPERATING EMPTY WEIGHT (1)</td>
<td>POUNDS</td>
<td>62,600 64,500 63,100 63,900 65,300</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>28,395 29,257 28,622 28,985 29,620</td>
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<td>MAX STRUCTURAL PAYLOAD</td>
<td>POUNDS</td>
<td>32,400 30,500 31,900 31,100 29,700</td>
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<td>KILOGRAMS</td>
<td>14,697 13,835 14,470 14,107 13,472</td>
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<td>SEATING CAPACITY (1)</td>
<td>TWO-CLASS</td>
<td>102: 14 FIRST CLASS AND 88 ECONOMY</td>
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<tr>
<td></td>
<td>ALL-ECONOMY</td>
<td>93 AT FIVE ABREAST, OR 130 AT SIX ABREAST; FAA EXIT LIMIT: 136</td>
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<tr>
<td>MAX CARGO VOLUME - LOWER DECK</td>
<td>CUBIC FEET</td>
<td>875 875 875 745 (2) 640 (3)</td>
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<td></td>
<td>CUBIC METERS</td>
<td>24.8 24.8 24.8 21.1 (2) 18.1 (3)</td>
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<td>US GALLONS</td>
<td>5,160 5,160 5,160 5,550 (2) 5,970 (3)</td>
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<td>LITERS</td>
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<td>POUNDS</td>
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<td>KILOGRAMS</td>
<td>15,682 15,682 15,682 16,867 (2) 18,143 (3)</td>
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</table>

**NOTES:**
(1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
(2) AIRPLANE WITH 390 GAL (1,475 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
(3) AIRPLANE WITH 810 GAL (3,065 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT

---

**2.1.4 GENERAL CHARACTERISTICS**

*MODEL ADVANCED 737-200*
### CHARACTERISTICS

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL ADVANCED 737-200C, -200QC</th>
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<tbody>
<tr>
<td><strong>MAX DESIGN TAXI WEIGHT</strong></td>
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<tr>
<td>POUNDS</td>
<td>116,000</td>
<td>117,500 120,000 125,000 128,600</td>
</tr>
<tr>
<td>KILOGRAMS</td>
<td>52,617</td>
<td>53,298  54,432  56,700  58,333</td>
</tr>
<tr>
<td><strong>MAX DESIGN TAKEOFF WEIGHT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POUNDS</td>
<td>115,500</td>
<td>117,000 119,500 124,500 128,100</td>
</tr>
<tr>
<td>KILOGRAMS</td>
<td>52,390</td>
<td>53,071  54,205  56,473  58,106</td>
</tr>
<tr>
<td><strong>MAX DESIGN LANDING WEIGHT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POUNDS</td>
<td>103,000</td>
<td>105,000 105,000 107,000 107,000</td>
</tr>
<tr>
<td>KILOGRAMS</td>
<td>46,720</td>
<td>47,628  47,628  48,535  48,535</td>
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<tr>
<td><strong>MAX DESIGN ZERO FUEL WEIGHT</strong></td>
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<td>43,772  43,092  44,906  44,906</td>
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<td><strong>MAX STRUCTURAL PAYLOAD</strong></td>
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<td>POUNDS</td>
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<td><strong>SEATING CAPACITY (2)</strong></td>
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<td></td>
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<tr>
<td>TWO-CLASS</td>
<td>102: 14 FIRST CLASS AND 88 ECONOMY</td>
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</tr>
<tr>
<td>ALL-ECONOMY</td>
<td>93 AT FIVE ABREAST, OR 130 AT SIX ABREAST; FAA EXIT LIMIT: 136</td>
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<tr>
<td><strong>MAX CARGO VOLUME - MAIN DECK (3)</strong></td>
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<td>CUBIC FEET</td>
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<td><strong>MAX CARGO VOLUME - LOWER DECK</strong></td>
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<td></td>
</tr>
<tr>
<td>CUBIC FEET</td>
<td>875</td>
<td>875    875    875    875</td>
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<td>CUBIC METERS</td>
<td>24.8</td>
<td>24.8   24.8   24.8   24.8</td>
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<tr>
<td><strong>USABLE FUEL</strong></td>
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<td></td>
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<tr>
<td>LITERS</td>
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<td>19,531 19,531 19,531 19,531</td>
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<tr>
<td>POUNDS</td>
<td>34,572</td>
<td>34,572 34,572 34,572 34,572</td>
</tr>
<tr>
<td>KILOGRAMS</td>
<td>15,682</td>
<td>15,682 15,682 15,682 15,682</td>
</tr>
</tbody>
</table>

**NOTES:**
- (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
- (2) AIRPLANE IN ALL-PASSENGER CONFIGURATION.
- (3) AIRPLANE IN ALL-CARGO CONFIGURATION, SEVEN PALLETS 88 x 125 IN (2.24 x 3.18 M) EACH.

### 2.1.5 GENERAL CHARACTERISTICS

**MODEL ADVANCED 737-200C, -200QC**

D6-58325-6

OCTOBER 2005  17
### Model 737-300 Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Units</th>
<th>CFM56-3B1 Engines (20,000 LB SLST)</th>
<th>CFM56-3B2 Engines (22,000 LB SLST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Design Taxi Weight</td>
<td>Pounds</td>
<td>125,000</td>
<td>130,500</td>
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<tr>
<td></td>
<td>Kilograms</td>
<td>56,700</td>
<td>59,194</td>
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<tr>
<td>Max Design Takeoff Weight</td>
<td>Pounds</td>
<td>124,500</td>
<td>130,000</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
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<tr>
<td>Max Design Landing Weight</td>
<td>Pounds</td>
<td>114,000</td>
<td>114,000</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
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<td>51,710</td>
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<tr>
<td>Max Design Zero Fuel Weight</td>
<td>Pounds</td>
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<td>105,000</td>
</tr>
<tr>
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<td>Kilograms</td>
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<td>47,628</td>
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<td>Operating Empty Weight (1)</td>
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<td>71,870</td>
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<td>Kilograms</td>
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<td>32,600</td>
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<td>Max Structural Payload</td>
<td>Pounds</td>
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<td>Kilograms</td>
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<td>15,028</td>
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<tr>
<td>Seating Capacity</td>
<td>Two-Class</td>
<td>128: 8 First Class and 120 Economy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All-Economy</td>
<td>134 at Six Abreast; FAA Exit Limit: 149</td>
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</tr>
<tr>
<td>Max Cargo Volume - Lower Deck</td>
<td>Cubic Feet</td>
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<td>US Gallons</td>
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<td>5,701 (2)</td>
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<td></td>
<td>Liters</td>
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<td>21,578 (2)</td>
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<td>Pounds</td>
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<td>38,197 (2)</td>
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<tr>
<td></td>
<td>Kilograms</td>
<td>16,141</td>
<td>17,326 (2)</td>
</tr>
</tbody>
</table>

**Notes:**
1. Operating empty weight for baseline mixed class configuration. Consult with airline for specific weights and configurations.
2. Airplane with 390 gal (1,475 L) auxiliary fuel tank in aft cargo compartment.
3. Airplane with 810 gal (3,065 L) auxiliary fuel tank in aft cargo compartment.
4. Airplane with 500 gal (1,893 L) auxiliary fuel tank in aft cargo compartment.
5. Airplane with 1,000 gal (3,785 L) auxiliary fuel tank in aft cargo compartment.
<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-400</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CFM56-3B2 ENGINES (22,000 LB SLST)</td>
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<tr>
<td>MAX DESIGN</td>
<td>POUNDS</td>
<td>139,000 143,000 150,500 143,000 144,000 150,500</td>
</tr>
<tr>
<td>TAKEOFF WEIGHT</td>
<td>POUNDS</td>
<td>138,500 142,500 150,000 142,500 143,500 150,000</td>
</tr>
<tr>
<td>LANDING WEIGHT</td>
<td>POUNDS</td>
<td>121,000 121,000 124,000 124,000 124,000 124,000</td>
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<tr>
<td>ZERO FUEL WEIGHT</td>
<td>KILOGRAMS</td>
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<tr>
<td>OPERATING EMPTY WEIGHT (1)</td>
<td>KILOGRAMS</td>
<td>33,189 33,189 33,189 33,643 33,643 33,643</td>
</tr>
<tr>
<td>MAX STRUCTURAL</td>
<td>POUNDS</td>
<td>39,830 39,830 43,830 42,830 42,830 42,830</td>
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<tr>
<td>PAYLOAD</td>
<td>KILOGRAMS</td>
<td>18,067 18,067 19,881 19,427 19,427 19,427</td>
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<tr>
<td>SEATING CAPACITY</td>
<td>TWO-CLASS</td>
<td>146: 8 FIRST CLASS AND 138 ECONOMY</td>
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<tr>
<td>MAX CARGO VOLUME</td>
<td>CUBIC FEET</td>
<td>1,373 1,234 (2) 1,146 (3) 1,222 (4) 1,097 (5) 1,097 (5)</td>
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<tr>
<td>- LOWER DECK</td>
<td>CUBIC METERS</td>
<td>38.9 34.9 (2) 32.5 (3) 34.6 (4) 31.1 (5) 31.1 (5)</td>
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<tr>
<td>USABLE FUEL</td>
<td>US GALLONS</td>
<td>5,311 5,701 (2) 6,121 (3) 5,803 (4) 6,295 (5) 6,295 (5)</td>
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<td>LITERS</td>
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<tr>
<td></td>
<td>POUNDS</td>
<td>35,584 38,197 (2) 41,011 (3) 38,880 (4) 42,177 (5) 42,177 (5)</td>
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<tr>
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<td>KILOGRAMS</td>
<td>16,141 17,326 (2) 18,602 (3) 17,636 (4) 19,131 (5) 19,131 (5)</td>
</tr>
</tbody>
</table>

**NOTES:**
(1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
(2) AIRPLANE WITH 390 GAL (1,475 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
(3) AIRPLANE WITH 810 GAL (3,065 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
(4) AIRPLANE WITH 500 GAL (1,893 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
(5) AIRPLANE WITH 1,000 GAL (3,785 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT

**2.1.7 GENERAL CHARACTERISTICS**

MODEL 737-400
<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-500 CFM56-3B1 ENGINES (18,500 LB SLST)</th>
<th>CFM56-3B1 ENGINES (20,000 LB SLST)</th>
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<td>MAX DESIGN</td>
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<td></td>
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<td>134,000</td>
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<td>125,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>125,000</td>
<td>136,500</td>
</tr>
<tr>
<td>TAXI WEIGHT</td>
<td>KILOGRAMS</td>
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<td>61,915</td>
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<td>POUNDS</td>
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<td>133,500</td>
<td>136,000</td>
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<td>TAKEOFF WEIGHT</td>
<td>KILOGRAMS</td>
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**NOTES:**
1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
2. AIRPLANE WITH 390 GAL (1,475 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
3. AIRPLANE WITH 810 GAL (3,065 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
4. AIRPLANE WITH 500 GAL (1,893 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
5. AIRPLANE WITH 1,000 GAL (3,785 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT

**2.1.8 GENERAL CHARACTERISTICS**

*MODEL 737-500*

D6-58325-6

20 OCTOBER 2005
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**NOTE:** (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

### 2.1.9 GENERAL CHARACTERISTICS

*MODEL 737-600*
## CHARACTERISTICS

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**NOTE:** (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

### 2.1.10 GENERAL CHARACTERISTICS

*MODEL 737-700, -700 WITH WINGLETS, -700C*
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NOTE: (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
### CHARACTERISTICS

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</tr>
<tr>
<td>KILOGRAMS</td>
<td>20,894</td>
</tr>
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</table>

**NOTE:** (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

### 2.1.12 GENERAL CHARACTERISTICS

*MODEL 737-900, -900 WITH WINGLETS*
## CHARACTERISTICS

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-900ER, -900ER WITH WINGLETS</th>
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<tbody>
<tr>
<td>Max Design Taxi Weight</td>
<td>POUNDS</td>
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<td>Max Design Takeoff Weight</td>
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<td>ALL-ECONOMY</td>
<td>186 with mid exit door, 21S: FAA exit limit</td>
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<td>Auxilliary Fuel Options</td>
<td>SEE NOTES</td>
<td>(2)</td>
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<td>(4)</td>
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<td>Max Cargo - Lower Deck</td>
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<td>52,508</td>
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<td>23,817</td>
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### Notes:

1. Operating empty weight for baseline mixed class configuration. Consult with airline for specific weights and configurations.
2. With no auxiliary fuel tank
3. With one auxiliary fuel tank
4. With two auxiliary fuel tanks

### 2.1.13 General Characteristics

**Model 737-900ER, -900ER with Winglets**

D6-58325-6

**October 2005**
## CHARACTERISTICS

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737 BBJ</th>
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<tr>
<td>MAX DESIGN POUNDS</td>
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<td>TAXI WEIGHT KILOGRAMS</td>
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<td>MAX DESIGN POUNDS</td>
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### NUMBER OF AUXILIARY FUEL TANKS

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<th>5</th>
<th>6</th>
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<th>8</th>
<th>9</th>
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<tr>
<td>SPEC OPERATING POUNDS</td>
<td>92,345</td>
<td>92,722</td>
<td>93,393</td>
<td>93,785</td>
<td>94,056</td>
<td>94,352</td>
<td>94,570</td>
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<td>42,058</td>
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<td>43,540</td>
<td>42,663</td>
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<td>32,215</td>
<td>31,944</td>
<td>31,648</td>
<td>31,430</td>
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<td>15,126</td>
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<td>14,609</td>
<td>14,520</td>
<td>14,385</td>
<td>14,286</td>
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<td>611</td>
<td>515</td>
<td>415</td>
<td>319</td>
<td>268</td>
<td>214</td>
<td>160</td>
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<td>PAYLOAD - LOWER DECK CUBIC METERS</td>
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<td>14.6</td>
<td>11.7</td>
<td>9.0</td>
<td>7.6</td>
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<td>4.6</td>
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<td>8,897</td>
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<td>9,917</td>
<td>10,213</td>
<td>10,457</td>
<td>10,697</td>
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<td>33,611</td>
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<td>38,660</td>
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<td>40,485</td>
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<td>31,103</td>
<td>31,846</td>
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**NOTES:**

(1) SPEC WEIGHT FOR NUMBER OF AUXILIARY FUEL TANKS SHOWN. CONSULT WITH AIRCRAFT OPERATOR FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

**2.1.14 GENERAL CHARACTERISTICS**

*MODEL 737 BBJ*  

D6-58325-6

26 OCTOBER 2005
### CHARACTERISTICS

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737 BBJ2</th>
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<td>MAX DESIGN POUNDS</td>
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<td>LANDING WEIGHT KILOGRAMS</td>
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<td>MAX DESIGN POUNDS</td>
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<td>ZERO FUEL WEIGHT KILOGRAMS</td>
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<tr>
<td>SPEC OPERATING POUNDS</td>
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<td>98,722</td>
<td>99,393</td>
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<td>44,167</td>
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<td>41,573</td>
<td>40,928</td>
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<td>27,992</td>
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**NOTES:**
(1) SPEC WEIGHT FOR NUMBER OF AUXILIARY FUEL TANKS SHOWN. CONSULT WITH AIRCRAFT OPERATOR FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

### 2.1.15 GENERAL CHARACTERISTICS

*MODEL 737 BBJ2*
2.2.1 GENERAL DIMENSIONS
MODEL 737-100
2.2.2 GENERAL DIMENSIONS
MODEL 737-200
2.2.3 GENERAL DIMENSIONS

MODEL 737-300
2.2.4 GENERAL DIMENSIONS
MODEL 737-300 WITH WINGLETS
2.2.5 GENERAL DIMENSIONS
MODEL 737-400
2.2.6 GENERAL DIMENSIONS

MODEL 737-500
2.2.7 GENERAL DIMENSIONS
MODEL 737-600
2.2.8 GENERAL DIMENSIONS

MODEL 737-600 WITH WINGLETS
2.2.9 GENERAL DIMENSIONS

MODEL 737-700, -700C

36  FEBRUARY 2006  

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2.2.10 GENERAL DIMENSIONS

MODEL 737-700 WITH WINGLETS, 737 BBJ

D6-58325-6
### 2.2.11 GENERAL DIMENSIONS

**MODEL 737-800**

- **82 FT 0 IN (24.99 m)**
- **77 FT 0 IN (23.47 m)**
- **129 FT 6 IN (39.47 m)**
- **43 FT 10 IN (13.36 m)**
- **15 FT 10 IN (4.83 m)**
- **12 FT 4 IN (3.76 m)**
- **124 FT 9 IN (38.02 m)**
- **51 FT 2 IN (15.60 m)**
- **13 FT 5 IN (4.09 m)**
- **112 FT 7 IN (34.32 m)**
- **47 FT 1 IN (14.35 m)**
- **APPROX 8 FT (2.44 m)**
- **18 FT 9 IN (5.72 m)**
2.2.12 GENERAL DIMENSIONS
MODEL 737-800 WITH WINGLETS, 737 BBJ2
2.2.13 GENERAL DIMENSIONS
MODEL 737-900, -900ER

D6-58325-6
2.2.14 GENERAL DIMENSIONS

MODEL 737-900, -900ER WITH WINGLETS
<table>
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<th>DESCRIPTION</th>
<th>737-100 MAX (AT OEW)</th>
<th>737-100 MIN (AT MTW)</th>
<th>737-200, -200C MAX (AT OEW)</th>
<th>737-200, -200C MIN (AT MTW)</th>
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<tbody>
<tr>
<td>A TOP OF FUSELAGE</td>
<td>16 – 9</td>
<td>5.11 FT – IN</td>
<td>16 – 9</td>
<td>5.11 FT – IN</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>8 – 8</td>
<td>2.64 M</td>
<td>8 – 1</td>
<td>2.46 M</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
<td>4 – 3</td>
<td>1.30 FT – IN</td>
<td>3 – 10</td>
<td>1.17 M</td>
</tr>
<tr>
<td>D ENGINE</td>
<td>1 – 11</td>
<td>0.58 M</td>
<td>1 – 8</td>
<td>0.51 M</td>
</tr>
<tr>
<td>E WINGTIP</td>
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<td>3.09 MF – IN</td>
<td>10 – 0</td>
<td>3.05 M</td>
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<td>F AFT CARGO DOOR</td>
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<td>1.55 MF – IN</td>
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<td>1.52 M</td>
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<td>G ENTRY DOOR NO 2</td>
<td>9 – 0</td>
<td>2.74 M</td>
<td>9 – 1</td>
<td>2.77 M</td>
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<td>H STABILIZER</td>
<td>16 – 8</td>
<td>5.08 M</td>
<td>17 – 0</td>
<td>5.18 M</td>
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<td>J VERTICAL TAIL</td>
<td>36 – 10</td>
<td>11.23 M</td>
<td>37 – 2</td>
<td>11.33 M</td>
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<tr>
<td>K OVERWING EXIT DOOR</td>
<td>10 – 5</td>
<td>3.18 M</td>
<td>10 – 3</td>
<td>3.12 M</td>
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<td>L BOTTOM OF FUSELAGE</td>
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<td>M MAIN DECK CARGO DOOR</td>
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<td>-</td>
<td>8 – 7</td>
<td>2.62 M</td>
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NOTES: CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADING, OLEO AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.

DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.

2.3.1 GROUND CLEARANCES
MODEL 737-100, -200, -200C
## DESCRIPTION

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<th>MAX (AT OEW)</th>
<th>MIN (AT MTW)</th>
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<td>16 – 10</td>
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<tr>
<td>B ENTRY DOOR NO 1</td>
<td>9 – 1</td>
<td>8 – 7</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
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<td>4 – 2</td>
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<td>D ENGINE</td>
<td>1 – 9</td>
<td>1 – 6</td>
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<tr>
<td>E WINGTIP</td>
<td>10 – 2</td>
<td>10 – 0</td>
</tr>
<tr>
<td>F AFT CARGO DOOR</td>
<td>4 – 6</td>
<td>4 – 6</td>
</tr>
<tr>
<td>G ENTRY DOOR NO 2</td>
<td>8 – 7</td>
<td>8 – 9</td>
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<tr>
<td>H STABILIZER</td>
<td>16 – 3</td>
<td>16 – 8</td>
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<tr>
<td>J VERTICAL TAIL</td>
<td>36 – 4</td>
<td>36 – 7</td>
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<tr>
<td>K OVERWING EXIT DOOR</td>
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<td>10 – 4</td>
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<tr>
<td>L BOTTOM OF FUSELAGE</td>
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<td>3 – 4</td>
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</table>

### NOTES:

CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADING, OLEO AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.

DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.

### 2.3.2 GROUND CLEARANCES

MODEL 737-300, -400, -500
### 2.3.3 GROUND CLEARANCES

**MODEL 737-600, -700C**

D6-58325-6

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**NOTES:** CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADING, OLEO AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.

DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.
<table>
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<th>DESCRIPTION</th>
<th>737-800 MAX (AT OEW)</th>
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DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.

2.3.4 GROUND CLEARANCES
MODEL 737-800, -900, -900ER
### DESCRIPTION

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DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.

### 2.3.5 GROUND CLEARANCES

*MODEL 737-700, -800, -900, -900ER WITH WINGLETS, BBJ, BBJ2*
2.4.1 INTERIOR ARRANGEMENTS

MODEL 737-100
2.4.2 INTERIOR ARRANGEMENTS

MODEL 737-200

TYPE 1 FORWARD SERVICE DOOR
30 x 65 IN (0.75 x 1.65 M)

TYPE 1 AFT SERVICE DOOR
30 x 65 IN (0.75 x 1.65 M)

TYPE II EMERGENCY EXIT
20 x 38 IN (0.50 x 0.97 M)
LH AND RH

WINDSCREEN

GALLEY

STOWAGE

LAVATORY

CLOSET WITH STOWAGE

DOUBLE ATTENDANT SEAT

NOTE:

* SIX-ABREAST SEATING
* 115 PASSENGERS AT 34-IN (0.86 M) PITCH OR
  120 PASSENGERS AT 32-IN (0.81 M) PITCH OR
  130 PASSENGERS AT 30-IN (0.76 M) PITCH AS SHOWN
* GALLEY FORWARD AND AFT
2.4.3 INTERIOR ARRANGEMENTS – MIXED CLASS

MODEL 737-200

NOTES:
* 14 FIRST CLASS PASSENGERS, 4-ABREAST SEATING AT 38-IN (0.97-M) PITCH
* 88 ECONOMY CLASS PASSENGERS, 6-ABREAST AT 34-IN (0.86 M) PITCH OR
2.4.4 INTERIOR ARRANGEMENTS – EXECUTIVE INTERIOR

MODEL 737-200
2.4.5 INTERIOR ARRANGEMENTS - PASSENGER/CARGO CONFIGURATION

MODEL 737-200C

NOTES:
* 56 PASSENGERS AS SHOWN
* SIX-ABREAST SEATING AT 34-IN (0.86-M) PITCH
* THREE CARGO PALLETS
2.4.6  INTERIOR ARRANGEMENTS – ALL-CARGO CONFIGURATION

MODEL 737-200C

TYPICAL MAIN DECK CARGO VOLUMES

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<tr>
<th>PALLET SIZE</th>
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<th>VOLUME – 7 PALLETS</th>
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<td>&quot;OC&quot; SYSTEM</td>
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<tr>
<td>88 x 108 IN</td>
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<td>358.4 CU FT</td>
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<td>88 x 125 IN</td>
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<td>394.0 CU FT</td>
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<td>(2.24 x 3.18 M)</td>
<td>(11.1 CU M)</td>
<td>(11.2 CU M)</td>
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2.4.7 INTERIOR ARRANGEMENTS

MODEL 737-300

D6-58325-6
2.4.8 INTERIOR ARRANGEMENTS

MODEL 737-400

MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN (0.91 M) PITCH
158 ECONOMY CLASS SEATS AT 32-IN (0.81 M) PITCH

SINGLE CLASS
168 ECONOMY CLASS SEATS AT 30-IN (0.76 M) PITCH

SINGLE CLASS
159 ECONOMY CLASS SEATS AT 32-IN PITCH

A ATTENDANT  C CLOSET  G GALLEY  L LAVATORY  S STOWAGE
2.4.9 INTERIOR ARRANGEMENTS

MODEL 737-500

MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN PITCH
100 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
122 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
132 ECONOMY CLASS SEATS AT 30-IN PITCH

A ATTENDANT C CLOSET G GALLEY L LAVATORY S STOWAGE
2.4.10 INTERIOR ARRANGEMENTS
MODEL 737-600

MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN PITCH
100 ECONOMY CLASS SEATS AT 32-IN PITCH

MIXED CLASS
70 BUSINESS CLASS SEATS AT 34-IN PITCH
39 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
123 ECONOMY CLASS SEATS AT 32-IN PITCH (SHOWN)
OR 130 ECONOMY CLASS SEATS AT 30-IN PITCH

A ATTENDANT  C CLOSET  G GALLEY  L LAVATORY  S STOWAGE
2.4.11 INTERIOR ARRANGEMENTS
MODEL 737-700, -700 WITH WINGLETS

MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN PITCH
120 ECONOMY CLASS SEATS AT 32-IN PITCH

MIXED CLASS
90 BUSINESS CLASS SEATS AT 34-IN PITCH
36 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
140 ECONOMY CLASS SEATS AT 32-IN PITCH (SHOWN)
OR 148 ECONOMY CLASS SEATS AT 30-IN PITCH

A ATTENDANT  C CLOSET  G GALLEY  L LAVATORY  S STOWAGE
2.4.12 INTERIOR ARRANGEMENTS

MODEL 737-700C

PASSENGER CONFIGURATION – MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN PITCH
118 ECONOMY CLASS SEATS AT 32-IN PITCH

CARGO CONFIGURATION
EIGHT 88 X 125 IN (2.24 X 3.18 M) PALLETS AS SHOWN
OR EIGHT 88 X 108 IN (2.24 X 2.64 M)

A ATTENDANT   C CLOSET   G GALLEY   L LAVATORY   S STOWAGE
2.4.13 INTERIOR ARRANGEMENTS
MODEL 737-800, -800 WITH WINGLETS

MIXED CLASS
12 FIRST CLASS SEATS AT 36-IN PITCH
148 ECONOMY CLASS SEATS AT 32-IN PITCH

MIXED CLASS
108 BUSINESS CLASS SEATS AT 34-IN PITCH
54 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
175 ECONOMY CLASS SEATS AT 32-IN PITCH (SHOWN)
OR 184 ECONOMY CLASS SEATS AT 30-IN PITCH

A ATTENDANT  C CLOSET  G GALLEY  L LAVATORY  S STOWAGE
2.4.14 INTERIOR ARRANGEMENTS

MODEL 737 BBJ, 737 BBJ2
2.4.15 INTERIOR ARRANGEMENTS
MODEL 737-900, -900 WITH WINGLETS

MIXED CLASS
12 FIRST CLASS SEATS AT 36-IN PITCH
165 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
177 ECONOMY CLASS SEATS AT 32-IN PITCH (SHOWN)
OR 189 ECONOMY CLASS SEATS AT 31-IN PITCH

A ATTENDANT  C CLOSET  G GALLEY  L LAVATORY
**PRELIMINARY INFORMATION**

**2.4.16 INTERIOR ARRANGEMENTS**

*MODEL 737-900ER, 900ER WITH WINGLETS*

**MIXED CLASS**
- 12 FIRST CLASS SEATS AT 36-IN PITCH
- 162 ECONOMY CLASS SEATS AT 32-IN PITCH

**SINGLE CLASS**
- 204 ECONOMY CLASS SEATS AT 30-IN PITCH

**SINGLE CLASS (HIGH-DENSITY SEATING)**
- 215 ECONOMY CLASS SEATS AT 28-IN PITCH

A ATTENDANT  G GALLEY  L LAVATORY  C CLOSET

62 DECEMBER 2005
2.5.1 CABIN CROSS-SECTIONS - SIX-ABREAST SEATING
WITH HATRACK-TYPE STOWAGE SYSTEM
MODEL 737-100
2.5.2 CABIN CROSS-SECTIONS - FOUR-ABREAST SEATING
WITH "WIDE-BODY LOOK" INTERIOR
MODEL 737-200
2.5.3 CABIN CROSS-SECTIONS - FIVE-ABREAST SEATING WITH CARRYALL COMPARTMENTS

MODEL 737-200

SEE SECTION 2.6

INTERIOR TRIM-TO-TRIM
139.2 IN (3.54 M)

18.87 IN (0.48 M)

19.76 IN (0.50 M)

23.90 IN (0.61 M)

8.3 IN (2.11 M)

20 IN (0.51 M)

148 IN (3.76 M)
NOTE: CABIN INTERIOR FOR BBJ1 AND BBJ2 AIRPLANES ARE DEPENDENT ON CUSTOMER OPTION.

2.5.4 CABIN CROSS-SECTIONS - FOUR-ABREAST SEATING
MODEL 737-200 WITH ADVANCED TECHNOLOGY INTERIOR
MODEL 737-300, -400, -500, -600, -700, -800, -900, BBJ1, BBJ2
2.5.5 CABIN CROSS-SECTIONS - SIX-ABREAST SEATING
MODEL 737-200 WITH ADVANCED TECHNOLOGY INTERIOR
MODEL 737-300, -400, -500, -600, -700, -800, -900
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<td>14 FT 7 IN (4.45 M)</td>
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<td>26 FT 5 IN (8.05 M)</td>
<td>16 FT 8 IN (5.08 M)</td>
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<td>737-400</td>
<td>30 FT 5 IN (9.27 M)</td>
<td>22 FT 8 IN (6.91 M)</td>
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<td>23 FT 1 IN (7.04 M)</td>
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</tr>
<tr>
<td>737-600</td>
<td>23 FT 0 IN (7.01 M)</td>
<td>10 FT 10 IN (3.30 M)</td>
</tr>
<tr>
<td>737-700, BBJ</td>
<td>26 FT 4 IN (8.03 M)</td>
<td>15 FT 4 IN (4.68 M)</td>
</tr>
<tr>
<td>737-800, BBJ2</td>
<td>35 FT 8 IN (10.87 M)</td>
<td>25 FT 2 IN (7.67 M)</td>
</tr>
<tr>
<td>737-900</td>
<td>39 FT 2 IN (11.94 M)</td>
<td>30 FT 4 IN (9.25 M)</td>
</tr>
</tbody>
</table>
## 2.6.2 LOWER CARGO COMPARTMENTS - CAPACITIES

### MODEL 737-100, -200

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>AFT CARGO COMPARTMENT</th>
<th>FORWARD COMPARTMENT BULK CARGO</th>
<th>TOTAL BULK CARGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>370 CU FT (10.48 CU M)</td>
<td>280 CU FT (7.93 CU M)</td>
<td>650 CU FT (18.41 CU M)</td>
</tr>
<tr>
<td>737-200 AND ADVANCED 737-200</td>
<td>505 CU FT (14.31 CU M)</td>
<td>370 CU FT (10.48 CU M)</td>
<td>875 CU FT (24.79 CU M)</td>
</tr>
<tr>
<td></td>
<td>370 CU FT (10.48 CU M)</td>
<td>390 GAL (1.475 L)</td>
<td>740 CU FT (20.96 CU M)</td>
</tr>
<tr>
<td></td>
<td>270 CU FT (7.65 CU M)</td>
<td>810 GAL (3.065 L)</td>
<td>640 CU FT (18.13 CU M)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>AFT CARGO COMPARTMENT</th>
<th>AUXILIARY FUEL TANK CAPACITY</th>
<th>AUXILIARY FUEL TANK COMPARTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>370 CU FT (10.48 CU M)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>737-200 AND ADVANCED 737-200</td>
<td>505 CU FT (14.31 CU M)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>370 CU FT (10.48 CU M)</td>
<td>390 GAL (1.475 L)</td>
<td>135 CU FT (3.83 CU M)</td>
</tr>
<tr>
<td></td>
<td>270 CU FT (7.65 CU M)</td>
<td>810 GAL (3.065 L)</td>
<td>235 CU FT (6.66 CU M)</td>
</tr>
</tbody>
</table>
### Lower Cargo Compartments - Capacities

**Model 737-300, -400, -500**

<table>
<thead>
<tr>
<th>Airplane Model</th>
<th>Aft Cargo Compartment</th>
<th>Forward Compartment</th>
<th>Total Bulk Cargo</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-300</td>
<td>643 CU FT (18.2 CU M)</td>
<td>0</td>
<td>1,068 CU FT (30.2 CU M)</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>504 CU FT (14.3 CU M)</td>
<td>390 GAL (1,475 L)</td>
<td>139 CU FT (3.9 CU M)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>416 CU FT (11.8 CU M)</td>
<td>810 GAL (3,065 L)</td>
<td>227 CU FT (6.4 CU M)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>492 CU FT (13.9 CU M)</td>
<td>500 GAL (1,893 L)</td>
<td>151 CU FT (5.3 CU M)</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>367 CU FT (10.4 CU M)</td>
<td>1,000 GAL (3,785 L)</td>
<td>276 CU FT (7.8 CU M)</td>
<td>(3)</td>
</tr>
<tr>
<td>737-400</td>
<td>766 CU FT (21.7 CU M)</td>
<td>0</td>
<td>1,373 CU FT (38.9 CU M)</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>627 CU FT (17.7 CU M)</td>
<td>390 GAL (1,475 L)</td>
<td>139 CU FT (3.9 CU M)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>539 CU FT (15.3 CU M)</td>
<td>810 GAL (3,065 L)</td>
<td>227 CU FT (6.4 CU M)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>615 CU FT (17.4 CU M)</td>
<td>500 GAL (1,893 L)</td>
<td>151 CU FT (5.3 CU M)</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>490 CU FT (13.9 CU M)</td>
<td>1,000 GAL (3,785 L)</td>
<td>276 CU FT (7.8 CU M)</td>
<td>(3)</td>
</tr>
<tr>
<td>737-500</td>
<td>535 CU FT (15.1 CU M)</td>
<td>0</td>
<td>822 CU FT (233.3 CU M)</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>396 CU FT (11.2 CU M)</td>
<td>390 GAL (1,475 L)</td>
<td>139 CU FT (3.9 CU M)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>308 CU FT (8.7 CU M)</td>
<td>810 GAL (3,065 L)</td>
<td>227 CU FT (6.4 CU M)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>384 CU FT (10.9 CU M)</td>
<td>500 GAL (1,893 L)</td>
<td>151 CU FT (5.3 CU M)</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>259 CU FT (7.3 CU M)</td>
<td>1,000 GAL (3,785 L)</td>
<td>276 CU FT (7.8 CU M)</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**Notes:**
1. Without auxiliary fuel tank
2. With Boeing-installed auxiliary fuel tank
3. With Rogersen-installed auxiliary fuel tank

---

**2.6.3 Lower Cargo Compartments - Capacities**

**Model 737-300, -400, -500**

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### 2.6.4 LOWER CARGO COMPARTMENTS - CAPACITIES

*Model 737-600, -700, -800, -900, -900ER with and without winglets*

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>AFT CARGO COMPARTMENT</th>
<th>FORWARD COMPARTMENT</th>
<th>TOTAL BULK CARGO</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-600</td>
<td>488 CU FT (13.8 CU M)</td>
<td>0</td>
<td>268 CU FT (7.6 CU M)</td>
<td>756 CU FT (21.4 CU M)</td>
</tr>
<tr>
<td>737-700</td>
<td>596 CU FT (16.9 CU M)</td>
<td>0</td>
<td>406 CU FT (11.5 CU M)</td>
<td>1,002 CU FT (28.4 CU M)</td>
</tr>
<tr>
<td>737-800</td>
<td>899 CU FT (25.5 CU M)</td>
<td>0</td>
<td>692 CU FT (19.6 CU M)</td>
<td>1,691 CU FT (45.1 CU M)</td>
</tr>
<tr>
<td>737-900</td>
<td>1,012 CU FT (28.7 CU M)</td>
<td>0</td>
<td>840 CU FT (23.8 CU M)</td>
<td>1,852 CU FT (52.5 CU M)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>996 CU FT (28.2 CU M)</td>
<td>0</td>
<td>830 CU FT (23.5 CU M)</td>
<td>1,826 CU FT (51.7 CU M)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>843 CU FT (23.9 CU M)</td>
<td>520 GAL (1,968 L)</td>
<td>153 CU FT (4.3 CU M)</td>
<td>830 CU FT (23.5 CU M)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>755 CU FT (21.4 CU M)</td>
<td>962 GAL (3,641 L)</td>
<td>241 CU FT (6.8 CU M)</td>
<td>830 CU FT (23.5 CU M)</td>
</tr>
</tbody>
</table>

NOTES:

(1) NO AUXILIARY FUEL TANK
(2) USEABLE CAPACITY, NO AUXILIARY FUEL TANK – PRELIMINARY ESTIMATES
(3) USEABLE CAPACITY, WITH ONE AUXILIARY FUEL TANK – PRELIMINARY ESTIMATES
(4) USEABLE CAPACITY, WITH TWO AUXILIARY FUEL TANKS – PRELIMINARY ESTIMATES
<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>FWD CARGO COMPARTMENT</th>
<th>AFT CARGO COMPARTMENT</th>
<th>TOTAL CARGO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF FUEL TANKS</td>
<td>CAPACITY AVAILABLE</td>
<td>NO OF FUEL TANKS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CU FT</td>
<td>CU M</td>
</tr>
<tr>
<td>737 BBJ</td>
<td>0</td>
<td>377</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>377</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>181</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>181</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>181</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>127</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>73</td>
<td>2.1</td>
</tr>
<tr>
<td>737 BBJ2</td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
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<td></td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>662</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>662</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>468</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>468</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>468</td>
<td>13.3</td>
</tr>
</tbody>
</table>

### 2.6.5 LOWER CARGO COMPARTMENTS - CAPACITIES

**MODEL 737 BBJ, 737 BBJ2**

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2.7.1 DOOR CLEARANCES - FORWARD MAIN ENTRY DOOR NO. 1

MODEL 737, ALL MODELS

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2.7.2 DOOR CLEARANCES – OPTIONAL FORWARD AIRSTAIRS, MAIN ENTRY DOOR NO 1
MODEL 737-100, -200, -300, -400, -500

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### DOOR CLEARANCES - LOCATIONS OF SENSORS AND PROBES -
**FORWARD OF MAIN ENTRY DOOR NO 1**

**MODEL 737, ALL MODELS**

<table>
<thead>
<tr>
<th>NAME OF SENSOR</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE ABOVE (+) OR BELOW (-) DOOR SILL REFERENCE LINE</th>
<th>PROTRUSION FROM AIRPLANE SKIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY PITOT-STATIC (L/R)</td>
<td>5 FT 3 IN (1.60 M)</td>
<td>+1 FT 3 IN (0.38 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ALTERNATE PITOT-STATIC (R)</td>
<td>5 FT 3 IN (1.60 M)</td>
<td>+ 3 IN (0.08 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ANGLE OF ATTACK (L/R)</td>
<td>5 FT 2 IN (1.57 M)</td>
<td>-5 IN (-0.13 M)</td>
<td>4 IN (0.10 M)</td>
</tr>
<tr>
<td>TOTAL AIR TEMPERATURE (L)</td>
<td>11 FT 6 IN (3.51 M)</td>
<td>+ 1 FT 6 IN (0.46 M)</td>
<td>4 IN (0.10 M)</td>
</tr>
</tbody>
</table>
2.7.4 DOOR CLEARANCES - FORWARD SERVICE DOOR
MODEL 737, ALL MODELS
2.7.5 DOOR CLEARANCES - AFT ENTRY DOOR AND AFT SERVICE DOOR

MODEL 737, ALL MODELS
2.7.6 DOOR CLEARANCES - AFT ENTRY DOOR WITH OPTIONAL AIRSTAIR

MODEL 737-100, 200
### 2.7.7 DOOR CLEARANCES - LOWER DECK CARGO COMPARTMENTS

**MODEL 737-600, -700, -800, -900, BBJ1, BBJ2**

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>FORWARD CARGO DOOR</th>
<th>AFT CARGO DOOR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOOR SIZE (C x B)</td>
<td>CLEAR OPENING (A x B)</td>
</tr>
<tr>
<td>737-100</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-200</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-300</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-400</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-500</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-600</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-700 737 BBJ</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-800 737 BBJ2</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-900</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
</tbody>
</table>
2.7.8 DOOR CLEARANCES – MAIN DECK CARGO DOOR  
MODEL 737-200C 

NOTE: 
1 EXPOSED FLOOR WIDTH FOR CRANE LOADING IN FULL OPEN POSITION
2.7.9 DOOR CLEARANCES – MAIN DECK CARGO DOOR

MODEL 737-700C

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3.0 AIRPLANE PERFORMANCE

3.1 General Information

3.2 Payload/Range for Long Range Cruise

3.3 F.A.R. and J.A.R. Takeoff Runway Length Requirements

3.4 F.A.R. Landing Runway Length Requirements
3.0 AIRPLANE PERFORMANCE

3.1 General Information

The graphs in Section 3.2 provide information on operational empty weight (OEW) and payload, trip range, brake release gross weight, and fuel limits for airplane models with the different engine options. To use these graphs, if the trip range and zero fuel weight (OEW + payload) are known, the approximate brake release weight can be found, limited by fuel quantity.

The graphs in Section 3.3 provide information on F.A.R. takeoff runway length requirements with the different engines at different pressure altitudes. Maximum takeoff weights shown on the graphs are the heaviest for the particular airplane models with the corresponding engines. Standard day temperatures for pressure altitudes shown on the F.A.R. takeoff graphs are given below:

<table>
<thead>
<tr>
<th>PRESSURE ALTITUDE</th>
<th>STANDARD DAY TEMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEET METERS</td>
<td>°F</td>
</tr>
<tr>
<td>0 0</td>
<td>59.0</td>
</tr>
<tr>
<td>2,000 610</td>
<td>51.9</td>
</tr>
<tr>
<td>4,000 1,219</td>
<td>44.7</td>
</tr>
<tr>
<td>6,000 1,829</td>
<td>37.6</td>
</tr>
<tr>
<td>8,000 2,438</td>
<td>30.5</td>
</tr>
</tbody>
</table>

For airplanes which are governed by the European Joint Airworthiness Authorities (JAA), the wet runway performance is shown in accordance with JAR-OPS 1 Subpart F, with wet runways defined in Paragraph 1.480(a)(10). Skid-resistant runways (grooved or PFC treated) per FAA or ICAO specifications exhibit runway length requirements that remove some or all of the length penalties associated with smooth (non-grooved) runways. Under predominantly wet conditions, the wet runway performance characteristics may be used to determine runway length requirements, if it is longer than the dry runway performance requirements.

The graphs in Section 3.4 provide information on landing runway length requirements for different airplane weights and airport altitudes. The maximum landing weights shown are the heaviest for the particular airplane model.
3.2.1 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737-100 (JT8D-7 ENGINES)

NOTES:
* DOMESTIC RESERVES
* JT8D-7 ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT
3.2.2 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-200 (JT8D-9/9A ENGINES)

NOTES:
* DOMESTIC RESERVES
* JT8D-9/9A ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT
3.2.3 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL ADVANCED 737-200 (JT8D-15/15A ENGINES)

NOTES:
* DOMESTIC RESERVES
* JT9D-15/15A ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX OEW + PAYLOAD

MAX TAK OFF WEIGHT

120 PASSENGERS AND BAGS
OEW: 61,300 LB (27,800 KG)

100,000 (45,350)

90,000 (40,820)

85,000 (38,550)

80,000 (36,280)

FUEL CAPACITY: 19,550 L

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT

0 4 8 12 16 20 24 28 30
RANGE - 100 NAUTICAL MILES

55 60 65 70 75 80 85 90 95 100
1,000 POUNDS

26 28 30 32 34 36 38
1,000 KILOGRAMS

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3.2.4 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL ADVANCED 737-200 (JT8D-17/17A ENGINES)

NOTES:
* DOMESTIC RESERVES
* JT9D-17/17A ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG)
FROM TAXI WEIGHT

59570 U.S. GAL (21900 L)
5550 U.S. GAL (2070 L)
5160 U.S. GAL (1930 L)
4950 U.S. GAL (1850 L)
4590 U.S. GAL (1720 L)
4080 U.S. GAL (1520 L)
3850 U.S. GAL (1450 L)
3600 U.S. GAL (1350 L)
3400 U.S. GAL (1280 L)

3.2.5 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL ADVANCED 737-200 (JT8D-17R/17AR ENGINES)

NOTES:
* DOMESTIC RESERVES
* JT9D-17R/17AR ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT
3.2.6 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737-300
NOTES:
* DOMESTIC RESERVES
* CFM56-3B-2 OR CFM56-3C-1 ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 31,000/35,000 FEET
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

3.2.7 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-400
3.2.8 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-500

NOTES:
* DOMESTIC RESERVES
* CFM56-3B-1 ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 31,000/35,000 FEET
* CONSULT USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.2.9 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-600

NOTES:
- 31–35–39,000 FT STEP CRUISE
- CRUISE MACH = LRC
- STANDARD DAY
- 200 NMI ALTERNATIVE
- TYPICAL MISSION RESERVES
- NOMINAL PERFORMANCE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAXIMUM ZERO FUEL WEIGHT
114,500 LB (51,936 KG)

1,000 NAUTICAL MILES RANGE

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5

70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 144,500

FUEL CAPACITY
US GAL (26,922 L)

1,000 POUNDS OEW PLUS PAYLOAD (1,000 KG)
45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145

124,000 (56,245)
120,000 (54,431)
115,000 (53,163)
110,000 (49,885)
105,000 (47,627)
100,000 (45,359)
95,000 (43,091)
90,000 (40,823)
85,000 (38,544)
80,000 (36,266)
75,000 (34,097)
70,000 (31,918)
65,000 (30,639)
60,000 (29,360)
55,000 (28,081)
50,000 (26,802)
45,000 (25,523)
40,000 (24,244)
35,000 (22,965)
30,000 (21,686)
25,000 (20,407)
20,000 (19,128)
15,000 (17,849)
10,000 (16,570)
5,000 (15,291)
0 (13,912)
3.2.10 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-700
3.2.11 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-700 WITH WINGLETS
3.2.12 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737 BBJ

NOTES:
- NBAA MISSION RULES
- LONG RANGE CRUISE SPEED
- 2 A/C PACK OPERATION
- CFM56-7B27 ENGINES

- NOMINAL PERFORMANCE
- CONSULT WITH USING AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

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**Maximum Zero Fuel Weight**

- 130,000 lb (59,000 kg)
- 125,000 lb (56,700 kg)
- 120,000 lb (54,450 kg)
- 115,000 lb (52,160 kg)
- 110,000 lb (49,890 kg)
- 105,000 lb (47,830 kg)
- 100,000 lb (45,360 kg)

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**Range vs. Fuel Weight**

- 10,000 nautical miles
- 20,000 nautical miles
- 30,000 nautical miles
- 40,000 nautical miles
- 50,000 nautical miles
- 60,000 nautical miles
- 70,000 nautical miles

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**Fuel Volume Limited**

- 1 TANKS
- 3 TANKS
- 5 TANKS

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**Weight and Balance**

- Brake Release Gross Weight (BREG WGT)
3.2.13 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-800
3.2.14 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-800 WITH WINGLETS
3.2.15 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737 BBJ2

NOTES:
- NBAA MISSION RULES
- LONG RANGE CRUISE SPEED
- 2 A/C PACK OPERATION
- CFM56-7B27 ENGINES
- NOMINAL PERFORMANCE
- CONSULT WITH USING AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAXIMUM ZERO FUEL WEIGHT

BRAKE GROSS WEIGHT

FUEL CAPACITY 6,875 GAL (25,025 L)
ONE AUX FUEL TANK
TWO TANKS
THREE TANKS
FOUR TANKS
FIVE TANKS
SIX TANKS
SEVEN TANKS
NOTES:
- 31-35-39,000 FT STEP CRUISE
- CRUISE MACH = LRC
- STANDARD DAY, ZERO WIND
- 200 NM ALTERNATIVE
- TYPICAL MISSION RESERVES
- NOMINAL PERFORMANCE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

3.2.16 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-900
3.2.17 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-900 WITH WINGLETS
3.2.18 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-900ER
3.2.19 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-900ER WITH WINGLETS

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3.3.1 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-100 (JT8D-7 ENGINES)
3.3.2 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)
MODEL 737-100 (JT8D-7 ENGINES)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-7 ENGINES
3.3.2 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-200 (JT8D-9/9A ENGINES)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-9/9A ENGINES
3.3.4 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C)
MODEL 737-200 (JT8D-9/9A ENGINES)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JTD-9/9A ENGINES
3.3.5 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL ADVANCED 737-200 (JT8D-15/15A ENGINES)
3.3.6 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL ADVANCED 737-200 (JT8D-15/15A ENGINES)
3.3.7 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY

MODEL ADVANCED 737-200 (JT8D-17/17A ENGINES)
3.3.8 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL ADVANCED 737-200 (JT8D-17/17A ENGINES)
3.3.9 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL ADVANCED 737-200 (JT8D-17R/17AR ENGINES)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-17R/17AR ENGINES
3.3.10  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL ADVANCED 737-200 (JT8D-17R/17AR ENGINES)
3.3.11 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY

MODEL 737-300 (CFM56-3B1 ENGINES AT 20,000 LB SLST)
3.3.12 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C),
MODEL 737-300 (CFM56-3B1 ENGINES AT 20,000 LB SLST)

NOTES:
* NO ENGINE AIR BLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56–3B1 ENGINES RATED AT 20,000 LB SLST
3.3.13 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-300 (CFM56—3B-2 ENGINES AT 22,000 LB SLST)
3.3.14 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-300 (CFM56-3B-2 ENGINES AT 22,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B2 ENGINES RATED AT 22,000 LB SLST
3.3.15 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY

MODEL 737-400 (CFM56-3B-2 ENGINES AT 22,000 LB SLST)
3.3.16 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-400 (CFM56-3B-2 ENGINES AT 22,000 LB SLST)

NOTES:
- NO ENGINE AIRBLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- CFM 56-3B2 ENGINES RATED AT 22,000 LB SLST
3.3.17 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-400 (CFM56-3C1 ENGINES AT 23,500 LB SLST)

NOTES:
- NO ENGINE AIRBLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- CFM56-3C1 ENGINES RATED AT 23,500 LB SLST
3.3.18 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-400 (CFM56-3C1 ENGINES AT 23,500 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3C1 ENGINES RATED AT 23,500 LB SLST

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Graph showing the relationship between F.A.R. takeoff runway length and operational takeoff weight for various altitudes and brake energy limits.
3.3.19 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-500 (CFM56-3B-1 ENGINES AT 20,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56–3B1 ENGINES RATED AT 20,000 LB SLST
3.3.20 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-500 (CFM56-3B-1 ENGINES AT 20,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B1 ENGINES RATED AT 20,000 LB SLST
3.3.21 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-500 (CFM56-3B-1 ENGINES AT 18,500 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B1 ENGINES RATED AT 18,500 LB SLST
3.3.22 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C)
MODEL 737-500 (CFM56-3B-1 ENGINES AT 18,500 LB SLST)
3.3.23 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-600 (CFM56-7B18 ENGINES AT 19,500 LB SLST)
3.3.24 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B18 ENGINES AT 19,500 LB SLST)

NOTES:
- CFM56-7B18 ENGINES AT 19,500 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WT 144,500 LB (65,544 KG)

1,000 FEET
1,000 METERS

95 100 105 110 115 120 125 130 135 140 145
45 50 55 60 65

1,000 POUNDS
1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

AIRPORT ELEVATION
(6,000 FEET, 1,829 METERS)

FLAPS 1

FLAPS 5

FLAPS 10

MAX IMPROVED CLIMB LIMIT

STANDARD DAY + 27°F
(STD + 15°C)
3.3.25 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-600 (CFM56-7B18 ENGINES AT 19,500 LB SLST)

NOTES:
- CFM56-7B18 ENGINES AT 19,500 LB SLST
- NO ENGINE BLEED AIR FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX BRAKE ENERGY LIMIT

FLAPS 1

FLAPS 25

FLAPS 5

SEA LEVEL

FLAPS 10

MAX DESIGN TAKEOFF WT 144,500 LB (65,544 KG)

STANDARD DAY

J.A.R. TAKEOFF RUNWAY LENGTH

1,000 METERS

1,000 FEET

AIRPORT ELEVATION FEET (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

95 100 105 110 115 120 125 130 135 140 145

3 4 5 6 7 8 9 10 11 12 13 14 15

4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0
3.3.26 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-600 (CFM56-7B18 ENGINES AT 19,500 LB SLST)

NOTES:
- CFM56-7B18 ENGINES AT 19,500 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
3.3.27 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-600 (CFM56-7B20 ENGINES AT 20,600 LB SLST)
3.3.28 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-600 (CFM56-7B20 ENGINES AT 20,600 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.29 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-600 (CFM56-7B20 ENGINES AT 20,000 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

![Graph showing takeoff runway length requirements](image-url)
3.3.30 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-600 (CFM56-7B20 ENGINES AT 20,600 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
### 3.3.31 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

**STANDARD DAY, DRY RUNWAY**

*Model 737-600 (CFM56-7B22 Engines at 22,700 LB SLST)*

**NOTES:**
- CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

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**Diagram:**

- FLAPS 1
- FLAPS 5
- FLAPS 10
- FLAPS 25

**Airport Elevation:**
- 8,000 ft (2,439 m)
- 6,000 ft (1,829 m)
- 4,000 ft (1,219 m)
- Sea Level (0 ft)

**Maximum Design Takeoff Weight:**
- 144,500 lb (65,544 kg)

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**Operational Takeoff Weight:**

- 95 - 145 thousand pounds
- 45 - 65 thousand kilograms
3.3.32 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B22 ENGINES AT 22,700 LB SLST)
3.3.33  J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-600 (CFM56-7B22 ENGINES AT 22,700 LB SLST)

NOTES:
- CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
144,500 LB (65,544 KG)

OPERATIONAL TAKEOFF WEIGHT

1,000 POUNDS
1,000 KILOGRAMS

1,000 FEET
1,000 METERS

J.A.R. TAKEOFF RUNWAY LENGTH
3.3.34 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-600 (CFM56-7B22 ENGINES AT 22,700 LB SLST)

NOTES:
- CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

STANDARD DAY + 27°F
(STD + 15°C)
3.3.35 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-700 (CFM56-7B20 ENGINES AT 20,600 LB SLST)
3.3.36 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-700 (CFM56-7B20 ENGINES AT 20,600 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADE
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

STANDARD DAY +27°F (STD + 15°C)
NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

3.3.37 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 (CFM56-7B20 ENGINES AT 20,600 LB SLST)
3.3.38 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-700 (CFM56-7B20 ENGINES AT 20,600 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

3.3.39 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-700 WITH WINGLETS, (CFM56-7B20 ENGINES AT 20,600 LB SLST)
3.3.40 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-700 WITH WINGLETS (CFM56-7B22 ENGINES AT 20,600 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX BRAKE ENERGY LIMIT
3.3.41 J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 WITH WINGLETS, (CFM56-7B20 ENGINES AT 20,600 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,800 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
154,500 LB (70,080 KG)

STANDARD DAY
3.3.42 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-700 WITH WINGLETS (CFM56-7B20 ENGINES AT 20,600 LB SLST)

NOTES:
- CFM56-7B20 ENGINES RATED AT 20,600 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
3.3.43 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-700 (CFM56-7B22 ENGINES AT 22,700 LB SLST)

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NOTES:
- CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.44 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-700 (CFM56-7B22 ENGINES AT 22,700 LB SLST)

NOTES:
- CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WEIGHT
154,500 LB (70,080 KG)
3.3.45 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 (CFM56-7B22 ENGINES AT 22,700 LB SLST)
3.3.46 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-700 (CFM56-7B22 ENGINES AT 22,700 LB SLST)

NOTES:
- CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

J.A.R. TAKEOFF RUNWAY LENGTH

STANDARD DAY +27°F (STD + 15°C)

AIRPORT ELEVATION (METERS) (FEET)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

MAX DESIGN TAKEOFF WEIGHT
154,500 LB (70,080 KG)

TIRE SPEED LIMIT

FLAPS 1
FLAPS 5
FLAPS 10
FLAPS 25

OPERATIONAL TAKEOFF WEIGHT

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3.3.47 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-700 WITH WINGLETS (CFM56-7B22 ENGINES AT 22,700 LB SLST)

NOTES:
- CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WT
154,500 LB (70,080 KG)
3.3.48 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27ºF (STD + 15ºC), DRY RUNWAY

MODEL  737-700 WITH WINGLETS  (CFM56-7B22 ENGINES AT 22,700 LB SLST)
3.3.49 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 (CFM56-7B22 ENGINES AT 22,700 LB SLST)

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NOTES:
• CFM56-7B22 ENGINES RATED AT 22,700 LB SLST
• NO ENGINE AIR BLEED FOR AIR CONDITIONING
• ZERO WIND, ZERO RUNWAY GRADIENT
• WET SMOOTH RUNWAY SURFACE
• CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
• TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

3.3.49 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 (CFM56-7B22 ENGINES AT 22,700 LB SLST)
3.3.50 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-700 WITH WINGLETS (CFM56-7B22 ENGINES AT 22,700 LB SLST)
3.3.51 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODE L  737-700 (CFM56-7B24 ENGINES AT 24,200 LB SLST)
3.3.52 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-700 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.53 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WEIGHT
154,500 LB (70,080 KG)
3.3.54 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-700 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROoved RUNWAY

MAX DESIGN TAKEOFF WEIGHT
154,500 LBS (70,000 KG)

FLAPS 25
FLAPS 10
FLAPS 5
FLAPS 1

AIRPORT ELEVATION FEET (METERS)
8,000 (2,439)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

1,000 METERS
1,000 FEET

1,000 POUNDS
1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

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3.3.55 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-700 WITH WINGLETS, (CFM56-7B24 ENGINES AT 24,200 LB SLST)
3.3.56 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-700 WITH WINGLETs, (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

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**STANDARD DAY + 27°F (STD + 15°C)**

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<th>MAX DESIGN TAKEOFF WT</th>
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<td>154,500</td>
<td>154,500</td>
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<td>70,080</td>
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3.3.57  J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 WITH WINGLETS, (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING CROOVED RUNWAY

Max Design Takeoff Wt
154,500 LB (70,080 KG)

Operational Takeoff Weight
1,000 Pounds
1,000 Kilograms
3.3.58 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-700 WITH WINGLETS, (CFM56-7B24 ENGINES AT 24,200 LB SLST)
3.3.59 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-700 WITH WINGLETS (CFM56-7B24B1 ENGINES AT 24,200 LB SLST)
3.3.60 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-700 WITH WINGLETS (CFM56-7B24B1 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24B1 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.61 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 WITH WINGLETS, (CFM56-7B24B1 ENGINES AT 24,200 LB SLST)

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3.3.62 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27ºF (STD + 15ºC), WET RUNWAY

MODEL 737-700 WITH WINGLETS, (CFM56-7B24B1 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24B1 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
154,500 LB (70,080 KG)
3.3.63 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-700 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)
3.3.64 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-700 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)
NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

3.3.65 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-700 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

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NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

3.3.66 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-700 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

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3.3.67 F.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY
DRIY RUNWAY

MODEL 737 BBJ (CFM56-7B27 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.68 F.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737 BBJ (CFM56-7B27 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.69 J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY

WET RUNWAY

MODEL 737 BBJ (CFM56-7B27 ENGINES AT 24,200 LB SLST)
3.3.70 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737 BBJ (CFM56-7B27 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX TAKEOFF WEIGHT
171,000 LB (77,580 KG)
3.3.71 F.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY
DRY RUNWAY
MODEL 737 BBJ (CFM56-7B27 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WT
171,000 LB (77,560 KG)
3.3.72 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737 BBJ (CFM56-7B27 ENGINES AT 26,300 LB SLST)
3.3.73 J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY
WET RUNWAY
MODEL 737 BBJ (CFM56-7B27 ENGINES AT 26,300 LB SLST)
3.3.74 J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737 BBJ (CFM56-7B27 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
3.3.75 F.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY
DRY RUNWAY
MODEL 737 BBJ (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

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3.3.76 F.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737 BBJ (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
NOTES:
- CFM56-7B27 ENGINES AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

3.3.77 J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY
WET RUNWAY
MODEL 737 BBJ (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.78 J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737 BBJ (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.79  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-800 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

1,000 METERS

1,000 FEET

AIRPORT ELEVATION (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)

SEA LEVEL

FLAPS 25

FLAPS 1

FLAPS 5

FLAPS 15

STANDARD DAY

TIRE SPEED LIMIT

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

120 125 130 135 140 145 150 155 160 165 170 175

55 60 65 70 75 80
3.3.80 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-800 (CFM56-7B24 ENGINES AT 24,200 LB SLST)
3.3.81 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, WET RUNWAY

MODEL 737-800 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT 174,200 LB (79,018 KG)
3.3.82 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-800 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

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3.3.83 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL 737-800 WITH WINGLETS (CFM56-7B24 ENGINES AT 24,200 LB SLST)
3.3.84 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-800 WITH WINGLETS CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
3.3.85 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-800 WITH WINGLETS CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

3.3.86 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-800 WITH WINGLETS CFM56-7B24 ENGINES AT 24,200 LB SLST)
3.3.87 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-800 (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WT
174,200 LB (78,016 KG)

AIRPORT ELEVATION
FEET (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL
FLAPS 25
FLAPS 15
FLAPS 5
FLAPS 1
TIRE SPEED LIMIT

F.A.R. TAKEOFF RUNWAY LENGTH
1,000 FEET

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

1,000 POUNDS
3.3.88 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-800 (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.89  J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL  737-800  (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE
  USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (78,016 KG)

AIRPORT ELEVATION
FEET (METERS)
2,000 (610)
4,000 (1,219)
5,000 (1,529)
6,000 (1,829)
8,000 (2,438)

FLAPS 1
FLAPS 5
FLAPS 15
FLAPS 25

STANDARD DAY
TIRE SPEED LIMIT

1,000 FEET
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0

1,000 METERS

120  125  130  135  140  145  150  155  160  165  170  175

1,000 POUNDS

55  60  65  70  75  80

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
3.3.90 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-800 (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
3.3.91 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL 737-800 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
3.3.92 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-800 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.93 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-800 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)
3.3.94 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-800 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMITH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)

STANDARD DAY + 27° F
(STD + 15° C)

225 MPH TIRE SPEED LIMIT

1,000 FEET
1,000 METERS

J.A.R. TAKEOFF RUNWAY LENGTH

125 130 135 140 145 150 155 160 165 170 175
1,000 POUNDS

60 65 70 75 80
1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

AIRPORT ELEVATION
5,000 (1,524)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

FLAPS 5
FLAPS 15
FLAPS 25
3.3.95 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL 737-800 (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

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[Graph and chart showing takeoff runway length requirements for different weights and flap settings.]
3.3.96 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-800  (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.97 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-800 (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.98 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-800 (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RAISED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT 174,200 LB (79,016 KG)
3.3.99 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-800 WITH WINGLETS (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.100 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-800 WITH WINGLETS (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.101 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-800 WITH WINGLETS (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (78,016 KG)

AIRPORT ELEVATION
2,438 FT (743 M)

OPERATIONAL TAKEOFF WEIGHT

1,000 KILOGRAMS
1,000 FEET
3.3.102 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-800 WITH WINGLETS (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING CROOVED RUNWAY

MAX DESIGN TAKEOFF WT 174,200 LB (79,016 KG)
3.3.103 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-800 WITH WINGLETS, (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.104 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-800 WITH WINGLETS, (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27B1 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX BRAKE ENERGY LIMIT

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
3.3.105 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-800 WITH WINGLETS, (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
3.3.106 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-800 WITH WINGLETS, (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.107 F.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY

DRY RUNWAY

MODEL 737 BBJ2 (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.108 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737 BBJ2 (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 27,300 LB SLST
- NO ENGINE BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.109 J.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY
WET RUNWAY
MODEL 737 BBJ2 (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.110 F.A.R TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737 BBJ2 (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT 174,200 LB (78,180 KG)

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3.3.111 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900 (CFM56-7B24 ENGINES AT 24,200 LB SLST)
3.3.112 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-900 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.113 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

STANDARD DAY

AIRPORT ELEVATION
FEET (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

FLAPS 25

FLAPS 15

FLAPS 5

225 MPH TIRE SPEED LIMIT

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)

J.A.R. TAKEOFF RUNWAY LENGTH
1,000 FEET

1,000 METERS

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

120 125 130 135 140 145 150 155 160 165 170 175

3 4 5 6 7 8 9 10 11 12 14 16
3.3.114 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-900 (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)

1,000 POUNDS
1,000 KILOGRAMS

1,000 METERS
1,000 FEET
3.3.115 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900 WITH WINGLETS  (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.116 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-900 WITH WINGLETS (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.117 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 WITH WINGLETS (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

STANDARD DAY

225 MPH
TIRE SPEED LIMIT

AIRPORT ELEVATION
FEET (METERS)

8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)

SEA LEVEL

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)

1,000 FEET
1,000 METERS

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

125 130 135 140 145 150 155 160 165 170 175

60 65 70 75 80
3.3.118 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-900 WITH WINGLETS (CFM56-7B24 ENGINES AT 24,200 LB SLST)

NOTES:
- CFM56-7B24 ENGINES RATED AT 24,200 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)

1,000 POUNDS

1,000 METERS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

AIRPORT ELEVATION
8,000 FEET (2,438 METERS)
6,000 FEET (1,829 Meters)
4,000 FEET (1,219 Meters)
2,000 FEET (610 Meters)
SEA LEVEL

FLAPS 5
FLAPS 15
FLAPS 25

TIRE SPEED LIMIT 225 MPH

STANDARD DAY + 27°F
(STD + 15°C)
3.3.119 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL 737-900 (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
3.3.120 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-900 (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

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3.3.121 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 lb (79,040 kg)
3.3.122 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-900 (CFM56-7B26 ENGINES AT 26,300 LB SLST)

Notes:
- CFM56-7B26 Engines rated at 26,300 lb SLST
- No engine air bleed for air conditioning
- Zero wind, zero runway gradient
- Wet smooth runway surface
- Consult with using airline for specific operating procedure prior to facility design
- Takeoff performance improvements are possible using grooved runway

MAX DESIGN TAKEOFF WT
174,200 LB (79,040 KG)
3.3.123 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX BRAKE ENERGY LIMIT
MAX DESIGN TAKEOFF WT 174,200 LB (79,016 KG)
3.3.124 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-900 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)
3.3.125 J.A.A. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
3.3.126 J.A.A. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-900 WITH WINGLETS (CFM56-7B26 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
3.3.127 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900 (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.128 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-900 (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.129 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.130 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-900 (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

![Graph showing JAR takeoff runway length requirements for 737-900 with CFM56-7B27 engines at standard day +27°F (STD + 15°C), wet runway.](image-url)
3.3.131 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900 WITH WINGLETS (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.132 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-900 WITH WINGLETS (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX BRAKE ENERGY LIMIT

STANDARD DAY + 27° F
(STD + 15° C)

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
3.3.133 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 (CFM56-7B27 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY
3.3.134 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-900 (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.135 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27B1 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

---

**STANDARD DAY**

- **TRE SPEED LIMIT**
- **MAX BRAKE ENERGY LIMIT**
- **FLAPS 1**
- **FLAPS 5**
- **FLAPS 15**
- **AIRPORT ELEVATION**
  - 8,000 FEET (2,438 METERS)
  - 6,000 FEET (1,829 METERS)
  - 4,000 FEET (1,219 METERS)
  - 2,000 FEET (610 METERS)
  - SEA LEVEL (FLAPS 25)

**MAX DESIGN TAKEOFF WT**
174,200 LB (79,016 KG)

---

**1,000 Meters**

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3.3.136 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B-27B1 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

STANDARD DAY + 27° F (STD + 15°C)
3.3.137 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)
3.3.138 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), WET RUNWAY
MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B-27B1 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

STANDARD DAY + 27° F
(STD + 15° C)
3.3.139 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)
3.3.140 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27B1 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.141 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56–7B27B1 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE
  USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)

1,000 FEET
60  65  70  75  80
1,000 KILOGRAMS
1,000 POUNDS

STANDARD DAY
TIRE SPEED LIMIT
225 MPH
3.3.142 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), WET RUNWAY

MODEL 737-900 (CFM56-7B27B1 ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27B1 ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
174,200 LB (79,016 KG)
3.3.143  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL 737-900ER (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

Max Brake Energy Limit

Max Design Takeoff Wt 184,200 LB (83,556 KG)
PRELIMINARY INFORMATION

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

3.3.144 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +31°F (STD + 19°C), DRY RUNWAY
MODEL 737-900ER (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)
3.3.145 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, WET RUNWAY

MODEL 737-900ER (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO W/N, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE
  USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT
187,700 LB (85,139 KG)
3.3.146 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +31°F (STD + 19°C), WET RUNWAY

MODEL 737-900ER (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

MAX DESIGN TAKEOFF WT 187,700 LB (85,139 KG)
NOTES:
- CFM56-7B27/3F ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

3.3.147 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900ER (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
3.3.148 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +31°F (STD + 19°C), DRY RUNWAY
MODEL 737-900ER (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
NOTES:
- CFM56-7B27/3F ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCEIMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

3.3.149 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900ER (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
3.3.150 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +31°F (STD + 19°C), WET RUNWAY
MODEL 737-900ER (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
3.3.151 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900ER (CFM56-7B27/3B1F ENGINES AT 27,300 LB SLST)
3.3.152  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +31°F (STD + 19°C), DRY RUNWAY

MODEL 737-900ER (CFM56-7B27/3B1F ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27/3B1F ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN TAKEOFF WT
187,700 LB (85,139 KG)

AIRPORT ELEVATION
FEET (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)

SEA LEVEL

FLAPS 25
FLAPS 15

225 MPH TIRE SPEED LIMIT
MAX BRAKE ENERGY LIMIT

1,000 FEET

1,0,000 POUNDS
1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
3.3.153 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, WET RUNWAY

MODEL 737-900ER (CFM56-7B27 ENGINES AT 27,300 LB SLST)
3.3.154 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +31°F (STD + 19°C), WET RUNWAY

MODEL 737-900ER (CFM56-7B27/7B1F ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27/7B1F ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- TAKEOFF PERFORMANCE IMPROVEMENTS ARE POSSIBLE USING GROOVED RUNWAY

PRELIMINARY INFORMATION
3.3.155 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.156 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +31° F (STD + 19°C), DRY RUNWAY

MODEL 737-900ER WITH WINGLETS (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.157  J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.158 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +31°F (STD + 19°C), WET RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B26/3 ENGINES AT 26,300 LB SLST)

NOTES:
- CFM56-7B26/3 ENGINES RATED AT 26,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.159 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
3.3.160 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +31°F (STD + 19°C), DRY RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
3.3.161 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
3.3.162 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +31°F (STD + 19°C), WET RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3F ENGINES AT 27,300 LB SLST)
NOTES:
- CFM56-7B27/3B1F ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

3.3.163 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3B1F ENGINES AT 27,300 LB SLST)
3.3.164 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +31°F (STD + 19°C), DRY RUNWAY

MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3B1F ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27/3B1F ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- DRY RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.165 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, WET RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3B1F ENGINES AT 27,300 LB SLST)

NOTES:
- CFM56-7B27/3B1F ENGINES RATED AT 27,300 LB SLST
- NO ENGINE AIR BLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- WET SMOOTH RUNWAY SURFACE
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.3.166 J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +31°F (STD + 19°C), WET RUNWAY
MODEL 737-900ER WITH WINGLETS (CFM56-7B27/3B1F ENGINES AT 27,300 LB SLST)
3.4.1 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-100
3.4.2 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-100

NOTES:
* $V_{APP} = 1.3V_S$
* ZERO WIND
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
  PROCEDURE PRIOR TO FACILITY DESIGN
3.4.3 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 25

MODEL 737-100
3.4.4 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-200, -200C
3.4.5 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-200, -200C
3.4.6 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 25
MODEL 737-200, -200C
3.4.7 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL ADVANCED 737-200, -200C
3.4.8 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-ADVANCED 737-200, -200C

NOTES:
- $V_{app} = 1.3V_S$
- ZERO WIND
- FLAP POSITION 30
- AUTOMATIC SPEED BRAKES
- CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN LANDING WEIGHT
107,000 LB (48,530 KG)

F.A.R. LANDING RUNWAY LENGTH
1,000 FEET

1000 FEET

1,000 POUNDS

1,000 KILOGRAMS

OPEATIONAL LANDING WEIGHT
NOTES:

* $V_{app} = 1.3V_s$
* ZERO WIND
* FLAP POSITION 25
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
  PROCEDUREPRIOR TO FACILITY DESIGN

3.4.9 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15

MODEL ADVANCED 737-200, -200C
3.4.10 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40

MODEL 737-300
3.4.11 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-600

NOTES:
* $V_{APP} = 1.3V_S$
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

---

FLAPS 30
MAX DESIGN LANDING WEIGHT
114,000 LB (51,700 KG)

---

DRY RUNWAY
WET RUNWAY

---

1,000 POUNDS
1,000 KILOGRAMS
OPERATIONAL LANDING WEIGHT

---

75 80 85 90 95 100 105 110 115 120 125

---

3 4 5 6 7 8 9
1,000 FEET

---

3 4 5 6 7 8 9
1,000 FEET

---

0.5 1.0 1.5 2.0 2.5 3.0
1,000 FEET

---

0.5 1.0 1.5 2.0 2.5 3.0
1,000 FEET

---

AIRPORT ELEVATION
FEET METERS
6,000 1,829
8,000 2,438
10,000 3,053
12,000 3,658
14,000 4,271

---

SEA LEVEL
4,000 1,219
6,000 1,829
8,000 2,438
10,000 3,053
12,000 3,658
14,000 4,271

---

35 40 45 50 55
3.4.12 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-300

NOTES:
\* V_{APP} = 1.3V_{S}
\* ZERO WIND, ZERO RUNWAY GRADIENT
\* FLAP POSITION 15
\* AUTOMATIC SPEED BRAKES
\* CONSULT WITH USING AIRLINE FOR SPECIFIC
PROCEDURE PRIOR TO FACILITY DESIGN

![Diagram showing landing runway length requirements for different weights and conditions.](image-url)
3.4.13 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40

MODEL 737-400
3.4.14 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-400

NOTES:
* \( V_{APP} = 1.3V_S \)
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
PROCEDURE PRIOR TO FACILITY DESIGN

FLAPS 30
MAX DESIGN LANDING WEIGHT
121,000 LB (54,800 KG)
124,000 LB (56,250 KG)

F.A.R. LANDING RUNWAY LENGTH
1,000 METERS

F. A. R. LANDING RUNWAY LENGTH
1,000 FEET

AIRPORT ELEVATION
FEET
6,000
8,000
10,000

METERS
2,658
2,600
2,400

WET RUNWAY
DRY RUNWAY

WEIGHT
1,000 POUNDS

1,000 KILOGRAMS
OPERATIONAL LANDING WEIGHT

35
45
55

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3.4.15 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15

MODEL 737-400

NOTES:
* $V_{app} = 1.5V_S$
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 15
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

FLAPS 15

WET DESIGN LANDING WEIGHT
121,000 LB (54,800 KG)
124,000 LB (56,290 KG)

AIRPORT ELEVATION
FEET  METERS
3,000  2,438
4,000  1,219
8,000  2,438
SEA LEVEL

DROUGHT RUNWAY
WET RUNWAY

1,000 POUNDS
1,000 KILOGRAMS

OPEATIONAL LANDING WEIGHT

75 80 85 90 95 100 105 110 115 120 125

3 35 40 45 50 55
NOTES:
* \( V_{app} = 1.3V_s \)
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
  PROCEDURE PRIOR TO FACILITY DESIGN

3.4.16 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-500
3.4.17 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-500

NOTES:
* V_{app} = 1.5V_S
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

![Diagram showing F.A.R. landing runway length requirements for FLAPS 30 on 737-500 model.](image-url)
3.4.18 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-500

NOTES:
* V_{APP} = 1.5V_{S}
* ZERO WIND, ZERO RUNWAY GRADE
* FLAP POSITION 15
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN
3.4.19  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-600

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

FLAPS 40

MAX DESIGN LANDING WT
121,500 (55,111 KG)

AIRPORT ELEVATION
FEET  (METERS)
8,000  (2,438)
6,000  (1,829)
4,000  (1,219)
2,000  (610)
SEA LEVEL

OPERATIONAL LANDING WEIGHT

D6-58325-6
3.4.20 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-600
3.4.21 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-600

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

F.A.R. LANDING RUNWAY LENGTH
1,000 METERS

AIRPORT ELEVATION FEET (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

MAX DESIGN LANDING WT 121,500 LB (55,111 KG)

OPERATIONAL LANDING WEIGHT

3.4.21 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-600
3.4.22 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-700

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINES FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.4.23 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-700

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

FLAPS 30

AIRPORT ELEVATION
FEET (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

MAX LANDING WEIGHT
129,200 LB (58,604 KG)

1,000 POUNDS
1,000 METERS

1,000 FEET
3.4.24 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15

MODEL 737-700
3.4.25 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-700 WITH WINGLETS
3.4.26 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-700 WITH WINGLETS
3.4.27  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-700 WITH WINGLETS
3.4.28 F.A.R LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40

MODEL 737 BBJ

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT AIRCRAFT USER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

AIRPORT ELEVATION
FEET (METERS)
10,000 (3,048)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

MAX DESIGN LANDING WEIGHT
134,000 LB (60,780 KG)
3.4.29 F.A.R LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737 BBJ
3.4.30 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-800

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN LANDING WT
146,300 (66,360 KG)

100 110 120 130 140 150
1,000 POUNDS

100 110 120 130 140 150
1,000 Kilograms

OPERATIONAL LANDING WEIGHT

AIRPORT ELEVATION (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

FLAPS 40

DRY RUNWAY
WET RUNWAY

1.0 1.5 2.0 2.5
1,000 FEET

3.0 4.0 5.0 6.0 7.0 8.0 9.0
1,000 METERS
3.4.31 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-800
3.4.32 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15

MODEL 737-800

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

3.4.33 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-800 WITH WINGLETS
3.4.34 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-800 WITH WINGLETS

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.4.35 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-800 WITH WINGLETS

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

AIRPORT ELEVATION FEET (METERS)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

MAX DESIGN LANDING WT
146,300 LB (66,361 KG)
3.4.36 F.A.R LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40

MODEL 737 BBJ2
3.4.37 F.A.R LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737 BBJ2
3.4.38 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40

Model 737-900
NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

FLAPS 30

AIRPORT ELEVATION
FEET METERS
8,000 (2,439)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

MAX DESIGN LANDING WT
146,300 LB (66,360 KG)

3.4.39 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-900
3.4.40 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15

MODEL 737-900
3.4.41 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-900 WITH WINGLETS
3.4.42 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-900 WITH WINGLETS
3.4.43 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-900 WITH WINGLETS

NOTES:
- STANDARD DAY
- AUTO SPOILERS OPERATIVE
- ANTI-SKID OPERATIVE
- ZERO WIND
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

AIRPORT ELEVATION FEET (METERS):
- 8,000 (2,438)
- 6,000 (1,829)
- 4,000 (1,219)
- 2,000 (610)
- SEA LEVEL

MAX DESIGN LANDING WT
146,300 LB (66,361 KG)

F.A.R. LANDING RUNWAY LENGTH
1,000 METERS

1,000 FEET

100 110 120 130 140 150
1,000 POUNDS

45 50 55 60 65
1,000 KILOGRAMS

OPERATIONAL LANDING WEIGHT
3.4.44 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS – FLAPS 40

MODEL 737-900 ER
3.4.45 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS – FLAPS 30
MODEL 737-900 ER
3.4.46 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS – FLAPS 15
MODEL 737-900ER
4.0 GROUND MANEUVERING

4.1 General Information
4.2 Turning Radii
4.3 Clearance Radii
4.4 Visibility from Cockpit in Static Position
4.5 Runway and Taxiway Turn Paths
4.6 Runway Holding Bay
4.0 GROUND MANEUVERING

4.1 General Information

The 737 landing gear system is a conventional tricycle-type. The main gear consists of two dual wheel assemblies, one on each side of the fuselage. The nose gear is a dual-wheel assembly.

Sections 4.2 and 4.3 show turning radii for various nose gear steering angles. Radii for the main and nose gears are measured from the outside edge of the tire, rather than from the center of the wheel strut.

Section 4.4 shows the range of pilot’s visibility from the cockpit within the limits of ambinocular vision through the windows. Ambinocular vision is defined as the total field of vision seen by both eyes at the same time.

The runway-taxiway turns in Section 4.5 show models 737-100 and 737-900 on a 100-ft (30-m) runway and 50-ft (15-m) taxiway system. Main gear tire tracks for the other airplane models will be between the tracks of the -100 and -900 models. Boeing 737 Series aircraft are able to operate on 100-foot wide runways worldwide. However, the FAA recommends the runway width criteria for the 737-700/-800/-900 is 150 ft (45 m) due to its maximum certificated takeoff weight.

Section 4.6 shows minimum holding apron requirements for the 737 airplane models. Holding aprons for larger aircraft should be adequate for the 737.
**NOTES:**

* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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**4.2.1 TURNING RADIi - NO SLIP ANGLE**

*MODEL 737-100*
**NOTES:**

- ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
- CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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### 4.2.2 TURNING RADI I - NO SLIP ANGLE

*MODEL 737-200*
NOTES:

* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.3 TURNING RADIUS - NO SLIP ANGLE
MODEL 737-300
### Notes:

* Actual operating turning radii may be greater than shown
* Consult with airline for specific operating procedure

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### 4.2.3 Turning Radii - No Slip Angle

*Model 737-300 with Winglets*
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.4 TURNING RADIUS - NO SLIP ANGLE
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.5 TURNING RADIi - NO SLIP ANGLE
MODEL 737-500
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* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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### 4.2.6 TURNING RADII - NO SLIP ANGLE

**MODEL 737-600**

D6-58325-6
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- ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
- CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.6 TURNING RADII - NO SLIP ANGLE
MODEL 737-600 WITH WINGLETS
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.7 TURNING RADIi - NO SLIP ANGLE
MODEL 737-700
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* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.8 TURNING RADII - NO SLIP ANGLE
MODEL 737-700 WITH WINGLETS, 737 BBJ
### NOTES:

* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN  
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.9 TURNING RADII - NO SLIP ANGLE  
MODEL 737-800
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* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.10 TURNING RADII - NO SLIP ANGLE
MODEL 737-800 WITH WINGLETS, 737 BBJ2

D6-58325-6
NOTES:

* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.11 TURNING RADII - NO SLIP ANGLE

MODEL 737-900, -900ER
NOTES:

* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN

* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.12 TURNING RADII - NO SLIP ANGLE
MODEL 737-900, -900ER WITH WINGLETS
### 4.3.1 MINIMUM TURNING RADIUS - 3° SLIP ANGLE

**MODEL 737-100, -200**

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**NOTES:**
- 3° TIRE SLIP ANGLE APPROXIMATE
- ONLY FOR 78° STEERING ANGLE
- CONSULT WITH AIRLINE FOR ACTUAL OPERATING DATA
- DIMENSIONS ROUNDED TO NEAREST 0.1 FT AND 0.1 METER

**THEORETICAL CENTER OF TURN FOR MINIMUM TURNING RADIUS.**
- SLOW CONTINUOUS TURNING AT MINIMUM THRUST ON ALL ENGINES.
- NO DIFFERENTIAL BRAKING.

**MINIMUM PAVEMENT WIDTH FOR 180° TURN**
- (OUTSIDE TO OUTSIDE OF TIRE)
- FOR PLANNING WIDTH, CONSULT USING AIRLINES.
NOTES:
- 3° TIRE SLIP ANGLE APPROXIMATE
  ONLY FOR 78° STEERING ANGLE
- CONSULT WITH AIRLINE FOR ACTUAL
  OPERATING DATA
- DIMENSIONS ROUNDED TO
  NEAREST 0.1 FT AND 0.1 METER

4.3.2 MINIMUM TURNING RADIUS - 3° SLIP ANGLE
MODEL 737-300, -300 WITH WINGLETS, -400, -500

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<td>36.3</td>
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<td>3.0</td>
<td>58.7</td>
<td>17.9</td>
<td>38.5</td>
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</table>
4.3.3 MINIMUM TURNING RADI - 3° SLIP ANGLE
MODEL 737-600, -700, -800, -900, -900ER
### 4.3.4 Minimum Turning Radii - 3° Slip Angle

Model 737-600, -700, -800, -900, -900ER with Winglets, 737 BBJ, 737 BBJ2

<table>
<thead>
<tr>
<th>Airplane</th>
<th>Effective Turning Angle (Deg)</th>
<th>X</th>
<th>Y</th>
<th>A</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
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<tbody>
<tr>
<td>737-600</td>
<td>75</td>
<td>37.1</td>
<td>11.3</td>
<td>9.9</td>
<td>3.0</td>
<td>60.8</td>
<td>18.5</td>
<td>39.4</td>
</tr>
<tr>
<td>737-700, 737BBJ</td>
<td>75</td>
<td>41.3</td>
<td>12.6</td>
<td>11.1</td>
<td>3.4</td>
<td>66.7</td>
<td>20.3</td>
<td>44.1</td>
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<tr>
<td>737-800, 737BBJ2</td>
<td>75</td>
<td>51.2</td>
<td>15.6</td>
<td>13.7</td>
<td>4.2</td>
<td>79.6</td>
<td>24.1</td>
<td>54.4</td>
</tr>
<tr>
<td>737-900, -900ER</td>
<td>75</td>
<td>56.3</td>
<td>17.2</td>
<td>15.1</td>
<td>4.6</td>
<td>86.2</td>
<td>26.2</td>
<td>59.6</td>
</tr>
</tbody>
</table>

Notes:
- 3° Tire Slip Angle approximate only for 78° steering angle.
- Consult with airline for actual operating data.
- Dimensions rounded to nearest 0.1 ft and 0.1 meter.

Theoretical center of turn for minimum turning radius. Slow continuous turning at minimum thrust on all engines. No differential braking.
4.4 VISIBILITY FROM COCKPIT IN STATIC POSITION

MODEL 737, ALL MODELS

NOTES:

- HEAD ROTATED ABOUT POINT 3.3 IN (0.08 M) AFT OF PILOT'S EYE POSITION.
- UPWARD VISION THROUGH MAIN WINDOW
- VISION THROUGH EYEBROW WINDOW
- WITH HEAD MOVED 5 IN (0.13 M) OUTBOARD
- DOWNWARD VISION THROUGH MAIN WINDOW

NOT TO BE USED FOR LANDING APPROACH VISIBILITY

VISUAL ANGLES IN PLANE PARALLEL TO LONGITUDINAL AXIS THROUGH PILOT'S EYE POSITION

VISUAL ANGLES IN HORIZONTAL PLANE THROUGH PILOT'S EYE POSITION

VISUAL ANGLES IN PLANE PERPENDICULAR TO LONGITUDINAL AXIS THROUGH PILOT'S EYE POSITION
NOTE:
BEFORE DETERMINING THE SIZE OF THE INTERSECTION FILLET, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE TYPES OF AIRCRAFT THAT ARE EXPECTED TO SERVE THE AIRPORT.

4.5.1 RUNWAY AND TAXIWAY TURN PATHS - RUNWAY-TO-TAXIWAY, MORE THAN 90 DEGREES, NOSE GEAR TRACKS CENTERLINE
MODEL 737, ALL MODELS

100 FT (30 M)

75 FT (23 M) R
100 FT (30 M) R
MODIFIED FILLET (AS REQUIRED)
APPROX PATH OF OUTSIDE EDGE OF MAIN GEAR TIRES (737-100) (1)
APPROX PATH OF OUTSIDE EDGE OF MAIN GEAR TIRES (737-900) (1)

50 FT (15 M)

737-100
737-900

100 FT (30 M)

(1) MAIN GEAR TIRE TRACKS FOR THE OTHER AIRPLANE MODELS WILL BE BETWEEN THE 737-100 AND 737-900 TRACKS.

NOSE GEAR TRACKS CENTERLINE OF TURNS
4.5.2 RUNWAY AND TAXIWAY TURN PATHS - RUNWAY-TO-TAXIWAY, 90 DEGREES, NOSE GEAR TRACKS CENTERLINE
MODEL 737, ALL MODELS
NOTE:
BEFORE DETERMINING THE SIZE OF THE INTERSECTION FILLET, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE TYPES OF AIRCRAFT THAT ARE EXPECTED TO SERVE THE AIRPORT.

4.5.3 RUNWAY AND TAXIWAY TURN PATHS - TAXIWAY-TO-TAXIWAY, 90 DEGREES, NOSE GEAR TRACKS CENTERLINE
MODEL 737, ALL MODELS

(1) MAIN GEAR TIRE TRACKS FOR THE OTHER AIRPLANE MODELS WILL BE BETWEEN THE 737-100 AND 737-900 TRACKS.
NOTE:
BEFORE DETERMINING THE SIZE OF THE INTERSECTION FILLET, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE TYPES OF AIRCRAFT THAT ARE EXPECTED TO SERVE THE AIRPORT.

4.5.4 RUNWAY AND TAXIWAY TURN PATHS - TAXIWAY-TO-TAXIWAY, 90 DEGREES, COCKPIT TRACKS CENTERLINE
MODEL 737, ALL MODELS

(1) MAIN GEAR TIRE TRACKS FOR THE OTHER AIRPLANE MODELS WILL BE BETWEEN THE 737-100 AND 737-900 TRACKS.
NOTE:
BEFORE DETERMINING THE SIZE OF THE
PAVEMENT AND SHOULDER, CHECK WITH
THE AIRLINES REGARDING THE OPERATING
PROCEDURES THAT THEY USE AND THE
AIRCRAFT TYPES THAT ARE EXPECTED
TO SERVE THE AIRPORT.

4.6. RUNWAY HOLDING BAY
MODEL 737, ALL MODELS
5.0 TERMINAL SERVICING

5.1 Airplane Servicing Arrangement - Typical Turnaround
5.2 Terminal Operations - Turnaround Station
5.3 Terminal Operations - En Route Station
5.4 Ground Servicing Connections
5.5 Engine Starting Pneumatic Requirements
5.6 Ground Pneumatic Power Requirements
5.7 Conditioned Air Requirements
5.8 Ground Towing Requirements
5.0 TERMINAL SERVICING

During turnaround at the terminal, certain services must be performed on the aircraft, usually within a given time, to meet flight schedules. This section shows service vehicle arrangements, schedules, locations of service points, and typical service requirements. The data presented in this section reflect ideal conditions for a single airplane. Service requirements may vary according to airplane condition and airline procedure.

Section 5.1 shows typical arrangements of ground support equipment during turnaround. As noted, if the auxiliary power unit (APU) is used, the electrical, air start, and air-conditioning service vehicles would not be required. Passenger loading bridges or portable passenger stairs could be used to load or unload passengers.

Sections 5.2 and 5.3 show typical service times at the terminal. These charts give typical schedules for performing service on the airplane within a given time. Service times could be rearranged to suit availability of personnel, airplane configuration, and degree of service required.

Section 5.4 shows the locations of ground service connections in graphic and in tabular forms. Typical capacities and service requirements are shown in the tables. Services with requirements that vary with conditions are described in subsequent sections.

Section 5.5 shows typical sea level air pressure and flow requirements for starting different engines. The curves are based on an engine start time of 90 seconds.

Section 5.6 shows pneumatic requirements for heating and cooling (air conditioning) using high pressure air to run the air cycle machine. The curves show airflow requirements to heat or cool the airplane within a given time and ambient conditions. Maximum allowable pressure and temperature for air cycle machine operation are 60 psia and 450°F, respectively.

Section 5.7 shows pneumatic requirements for heating and cooling the airplane, using low pressure conditioned air. This conditioned air is supplied through an 8-in ground air connection (GAC) directly to the passenger cabin, bypassing the air cycle machines.

Section 5.8 shows ground towing requirements for various ground surface conditions.
5.1.1 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-100
5.1.2 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-200
5.1.3 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-300
5.1.4 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-600
5.1.5 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-500
5.1.6 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-600
5.1.7 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-700
5.1.8 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-700 WITH WINGLETS, 737 BBJ
5.1.9. AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-800

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5.1.10 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-800 WITH WINGLETS, 737 BBJ2
5.1.11. AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-900, -900ER
5.1.12 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-900, -900ER WITH WINGLETS
1. **LOWER AIRSTAIRS**
2. **PROVIDE GROUND SUPPORT EQUIPMENT**
3. **DEPILENE PASSENGERS**
4. **UNLOAD BAGGAGE**
5. **UNLOAD CARGO**
6. **FUEL AIRPLANE**
7. **SERVICE WASTE TANKS**
8. **SERVICE POTABLE WATER**
9. **SERVICE GALLEY**
10. **SERVICE CABIN**
11. **PERFORM MAINTENANCE CHECKS**
12. **LOAD CARGO**
13. **LOAD BAGGAGE**
14. **ENPILENE PASSENGERS**
15. **START ENGINES**
16. **CLEAR AIRPLANE FOR DEPARTURE**

<table>
<thead>
<tr>
<th>ESTIMATED TIME (MINUTES AFTER PARKED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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</tbody>
</table>

**NOTES:**

1. ESTIMATES BASED ON MIXED-CLASS CONFIGURATION, 45% LOAD FACTOR
2. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
3. TOTAL TIME ON THE RAMP IS 30 MINUTES
4. BOTH FORWARD AND AFT DOORS ARE USED
5. 100% PASSENGER EXCHANGE
6. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
7. GROUND OPERATIONS REQUIREMENTS SHOULD BE COORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING

---

**5.2.1 TERMINAL OPERATIONS - TURNAROUND STATION**

*MODEL 737—100, -200*
1. DEPLOY AFT AIRSTAIRS
2. DEPLAN PASSENGERS
3. POSITION CARGO LOADER
4. UNLOAD LOWER LOBE COMPARTMENTS
5. SERVICE LAVATORIES
6. SERVICE POTABLE WATER
7. FUEL AIRPLANE
8. SERVICE GALLEY
9. SERVICE CABIN
10. OPEN CARGO DOOR
11. UNLOAD PALLET 1
12. UNLOAD PALLET 2
13. LOAD LOWER LOBE COMPARTMENTS
14. LOAD PALLET 2
15. LOAD PALLET 1
16. REMOVE CARGO LOADER
17. BOARD PASSENGERS
18. CLOSE CARGO DOOR
19. RETRACT AFT AIRSTAIRS
20. START ENGINES

NOTES:
1. ESTIMATES BASED ON 76-PASSENGER/TWO MAIN DECK PALLET CONFIGURATION
   100% LOAD FACTOR AND FULL PASSENGER/BAGGAGE EXCHANGE
2. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
3. TOTAL TIME ON THE RAMP IS 25 MINUTES
4. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL
   OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL
   RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
5. GROUND OPERATIONS REQUIREMENTS SHOULD BE COORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING

5.2.2 TERMINAL OPERATIONS - TURNAROUND STATION, PASSENGER/CARGO
MODEL 737-200C
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**NOTES:**
1. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
2. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
3. GROUND OPERATIONS REQUIREMENTS SHOULD BE COORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING.
5.2.4 TERMINAL OPERATIONS - TURNAROUND STATION,
MODEL 737-300, -400, -500

NOTES:
1. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
2. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
3. GROUND OPERATIONS REQUIREMENTS SHOULD BE COORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING.
## 5.2.5 Terminal Operations - Turnaround Station

### Passenger Services

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>6.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>14.0</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>10.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>9.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

### Cargo/Baggage Handling

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>3.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>7.0</td>
</tr>
</tbody>
</table>

### Airplane Servicing

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacuum Toilets</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>2.0</td>
</tr>
</tbody>
</table>

### Notes:
- **Position/Remove Equipment**
  - 100% Exchange of Passengers and Cargo
  - 108 Passengers Board and Deplane via FWD LH Entry Door
  - Fuel - 2,700 Gallons at 300 GPM
  - 1 Nozzle at 50 PSIG
  - 1,000 Gallons Fuel Reserve

- **Passenger Loading Rates:**
  - Unloading - 18 Pax per Minute
  - Loading - 12 Pax per Minute

- **Baggage Loading Rates:**
  - Unloading - 15.0 Bags per Minute
  - Loading - 10.0 Bags per Minute

- 1.0 Bags per Pax (3.0 cu ft)
- 38 Bags FWD/70 Bags AFT
- 85% Stacking Efficiency
- 1 Galley Truck Used
- 100% Load Factor

*This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.*
### 5.2.6 TERMINAL OPERATIONS - TURNAROUND STATION

#### MODEL 737-700, -700 WITH WINGLETS

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>8.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>15.0</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>10.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>12.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>8.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacuum Toilets</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>2.0</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td>---</td>
</tr>
</tbody>
</table>

#### Notes:
- Position/Remove Equipment
- 100% Exchange of Passengers and Cargo
- 140 Passengers Board and Deplane via FWD LH Entry Door
- Fuel = 2,700 Gallons at 300 GPM
- 1 Nozzle at 50 PSIG
- 1,000 Gallons Fuel Reserve
- Passenger Loading Rates:
  - Unloading = 18 Pax per Minute
  - Loading = 12 Pax per Minute
- Baggage Loading Rates:
  - Unloading = 15.0 Bags per Minute
  - Loading = 10.0 Bags per Minute
- 1.0 Bags per Pax (3.0 cu ft)
- 57 Bags FWD/83 Bags AFT
- 83% Stacking Efficiency
- 1 Galley Truck Used
- 100% Load Factor

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### 5.2.7 TERMINAL OPERATIONS - TURNAROUND STATION

#### MODEL 737 -800, 800 WITH WINGLETS

<table>
<thead>
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<th>Passenger Services</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Galleys</td>
<td>15.0</td>
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<tr>
<td>Service Cabin</td>
<td>11.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>14.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>7.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>9.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacuum Toilets</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>2.0</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td>---</td>
</tr>
</tbody>
</table>

**Notes:**
- Position/Remove Equipment
- 100% Exchange of Passengers and Cargo
- 160 Passengers Board and Deplane Via FWD LH ENTRY DOOR
- Fuel - 2,700 gallons at 300 GPM
  - 1 nozzle at 50 PSIG
  - 1,000 gallons fuel reserve
- Passenger Loading Rates:
  - Unloading - 18 Pax per minute
  - Loading - 12 Pax per minute
- Baggage Loading Rates:
  - Unloading - 15.0 bags per minute
  - Loading - 10.0 bags per minute
- 1.0 bags per Pax (3.0 cu ft)
- 69 bags FWD/91 bags AFT
- 83% Stacking Efficiency
- 1 galley truck used
- 100% load factor

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### Model 737-900, -900ER, With and Without Winglets

#### Passenger Services
- **Position Passenger Bridge or Stairs**: 1.0
- **Deplane Passengers**: 10.0
- **Service Galley**: 15.0
- **Service Cabin**: 11.0
- **Board Passengers**: 15.0
- **Remove Passenger Bridge or Stairs**: 1.0

#### Cargo/Baggage Handling
- **Unload FWD Compartment**: 5.0
- **Load FWD Compartment**: 8.0
- **Unload AFT Compartment**: 6.0
- **Load AFT Compartment**: 10.0

#### Airplane Servicing
- **Fuel Airplane**: 9.0
- **Service Vacuum Toilets**: 10.0
- **Service Potable Water**: 2.0
- **Start Engines/Push Back**:

---

**Notes:**
- **Position/Remove Equipment**
- **100% Exchange of Passengers and Cargo**
- **177 Passengers Board and Deplane Via FWD LH Entry Door**
- **Fuel - 2,700 Gallons at 300 GPM**
- **1 Nozzle at 50 PSIG**
- **1,000 Gallons Fuel Reserve**

**Passenger Loading Rates:**
- Unloading - 18 PAX per minute
- Loading - 12 PAX per minute

**Baggage Loading Rates:**
- Unloading - 15.0 Bags per minute
- Loading - 10.0 Bags per minute

**1.0 Bags per Pax (3.0 cu ft)**
**80 Bags FWD/57 Bags AFT**
**83% Stacking Efficiency**
**1 Galley Truck Used**
**100% Load Factor**

---

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
NOTE

TURNAROUND TERMINAL OPERATIONS TIME CHARTS ARE NOT INCLUDED IN THIS DOCUMENT BECAUSE THE DIFFERENT CONFIGURATIONS OF BOEING BUSINESS JET AIRPLANES HAVE INDIVIDUAL REQUIREMENTS. CONSULT AIRCRAFT USER/OPERATOR FOR CURRENT REQUIREMENTS

5.2.9 TERMINAL OPERATIONS - TURNAROUND STATION
MODEL 737 BBJ, BBJ2
<table>
<thead>
<tr>
<th>Task Description</th>
<th>Estimated Time (Minutes after parked)</th>
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</thead>
<tbody>
<tr>
<td>LOWER AIRSTAIRS</td>
<td></td>
</tr>
<tr>
<td>PROVIDE GROUND SUPPORT EQUIPMENT</td>
<td></td>
</tr>
<tr>
<td>DEPLACE PASSENGERS</td>
<td></td>
</tr>
<tr>
<td>UNLOAD BAGGAGE</td>
<td></td>
</tr>
<tr>
<td>UNLOAD CARGO</td>
<td></td>
</tr>
<tr>
<td>FUEL AIRPLANE</td>
<td></td>
</tr>
<tr>
<td>SERVICE WASTE TANKS</td>
<td></td>
</tr>
<tr>
<td>SERVICE POTABLE WATER</td>
<td></td>
</tr>
<tr>
<td>SERVICE GALLEY</td>
<td></td>
</tr>
<tr>
<td>SERVICE CABIN</td>
<td></td>
</tr>
<tr>
<td>PERFORM MAINTENANCE CHECKS</td>
<td></td>
</tr>
<tr>
<td>LOAD CARGO</td>
<td></td>
</tr>
<tr>
<td>LOAD BAGGAGE</td>
<td></td>
</tr>
<tr>
<td>ENPLACE PASSENGERS</td>
<td></td>
</tr>
<tr>
<td>START ENGINES</td>
<td></td>
</tr>
<tr>
<td>CLEAR AIRPLANE FOR DEPARTURE</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

1. ESTIMATES BASED ON MIXED-CLASS CONFIGURATION, 65% LOAD FACTOR
2. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
3. TOTAL TIME ON THE RAMP IS 25 MINUTES
4. BOTH FORWARD AND AFT DOORS ARE USED
5. 75% PASSENGER EXCHANGE
6. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
7. GROUND OPERATIONS REQUIREMENTS SHOULD BE COORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING

**5.3.1 TERMINAL OPERATIONS - EN ROUTE STATION**

*MODEL 737-100, -200, -300, -400, -500*
### 5.3.2 TERMINAL OPERATIONS - EN ROUTE STATION

**MODEL 737-600**

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>4.0</td>
</tr>
<tr>
<td>Service Galleys</td>
<td>---</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>---</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>5.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload Fwd Compartment</td>
<td>2.0</td>
</tr>
<tr>
<td>Load Fwd Compartment</td>
<td>2.0</td>
</tr>
<tr>
<td>Unload Aft Compartment</td>
<td>3.0</td>
</tr>
<tr>
<td>Load Aft Compartment</td>
<td>4.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>---</td>
</tr>
<tr>
<td>Service Toilets</td>
<td>---</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>---</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td>---</td>
</tr>
</tbody>
</table>

**NOTES:**
- Position/Remove Equipment
- 100% Load Factor (108 Passengers)
- 65 Passengers deplane and board via FWD LH ENTRY Door
- 60% Exchange of Passengers and Cargo
- Passenger Loading Rates:
  - Unloading - 18 Pax per minute
  - Loading - 12 Pax per minute
- 1.0 Bags per Pax (4.5 cu ft)
- 23 Bags FWD/42 Bags AFT
- 83% Stacking Efficiency
- Baggage Loading Rates:
  - Unloading - 15.0 Bags per minute
  - Loading - 10.0 Bags per minute

**THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.**
### 5.3.3 TERMINAL OPERATIONS - EN ROUTE STATION

**MODEL 737-700, -700 WITH WINGLETS**

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>5.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>---</td>
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<tr>
<td>Service Cabin</td>
<td>---</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>7.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
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<tr>
<td>Load FWD Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>5.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>---</td>
</tr>
<tr>
<td>Service Toilets</td>
<td>---</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>---</td>
</tr>
</tbody>
</table>

**Start Engines/Push Back**

**Notes:**
- Position/Remove Equipment
- 100% Load Factor (140 Passengers)
- 84 Passengers Deplane and Board via FWD LH Entry Door
- 60% Exchange of Passengers and Cargo
- Passenger Loading Rates:
  - Unloading - 18 Pax per minute
  - Loading - 12 Pax per minute
- Baggage Loading Rates:
  - Unloading - 15.0 Bags per minute
  - Loading - 10.0 Bags per minute

1.0 Bags per Pax (4.5 CU FT)
34 Bags FWD/50 Bags AFT
83% Stacking Efficiency

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### 5.3.4 TERMINAL OPERATIONS - EN ROUTE STATION

**MODEL 737-800, -800 WITH WINGLETS**

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Minutes)</th>
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<tbody>
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</tr>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
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<tr>
<td>Deplane Passengers</td>
<td>5.0</td>
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<tr>
<td>Service Galley</td>
<td>---</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>---</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>8.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>CARGO/BAGGAGE HANDLING</strong></td>
<td></td>
</tr>
<tr>
<td>Unload FWD Compartment</td>
<td>3.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>AIRCRAFT SERVICING</strong></td>
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<tr>
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</tr>
<tr>
<td>Service Toilets</td>
<td>---</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>---</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td>---</td>
</tr>
</tbody>
</table>

**NOTES:**
- POSITION/REMOVE EQUIPMENT
  - 100% Load Factor (160 Passengers)
  - 95 Passengers Deplane and Board via FWD LH Entry Door
  - 80% Exchange of Passengers and Cargo
- Passenger Loading Rates:
  - Unloading - 18 Pax per Minute
  - Loading - 12 Pax per Minute
- Baggage Loading Rates:
  - Unloading - 15.0 Bags per Minute
  - Loading - 10.0 Bags per Minute
  - 1.0 Bags per Pax (4.5 cu ft)
  - 41 Bags FWD/54 Bags AFT
  - 83% Stacking Efficiency

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### 5.3.5 TERMINAL OPERATIONS - EN ROUTE STATION

#### MODEL 737-900, -900ER, WITH AND WITHOUT WINGLETS

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
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<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>6.0</td>
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<tr>
<td>Service Galley</td>
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<tr>
<td>Service Cabin</td>
<td>---</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>9.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>3.0</td>
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<tr>
<td>Load FWD Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>6.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>---</td>
</tr>
<tr>
<td>Service Toilets</td>
<td>---</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>---</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td>---</td>
</tr>
</tbody>
</table>

#### Notes:
- **Position/Remove Equipment**
- **100% Load Factor (177 Passengers)**
- **106 Passengers Deplane and Board Via FWD LH Entry Door**
- **60% Exchange of Passengers and Cargo**

- **Passenger Loading Rates:**
  - Unloading: 18 Pax per minute
  - Loading: 12 Pax per minute

- **Baggage Loading Rates:**
  - Unloading: 15.0 Bags per minute
  - Loading: 10.0 Bags per minute

- **1.0 Bags per Pax (4.5 cu ft)**
- **48 Bags FWD/56 Bags AFT 83% Stacking Efficiency**

---

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
NOTE

ENROUTE TERMINAL OPERATIONS TIME CHARTS
ARE NOT INCLUDED IN THIS DOCUMENT
BECAUSE THE DIFFERENT CONFIGURATIONS
OF BOEING BUSINESS JET AIRPLANES
HAVE INDIVIDUAL REQUIREMENTS.
CONSULT AIRCRAFT USER/OPERATOR FOR CURRENT
REQUIREMENTS

5.3.6 TERMINAL OPERATIONS - ENROUTE STATION
MODEL 737 BBJ, BBJ2
5.4.1 GROUND SERVICING CONNECTIONS

MODEL 737-100
5.4.2 GROUND SERVICING CONNECTIONS

MODEL 737-200
5.4.3 GROUND SERVICING CONNECTIONS

MODEL 737-300
5.4.4 GROUND SERVICING CONNECTIONS
MODEL 737-400
5.4.5 GROUND SERVICING CONNECTIONS
MODEL 737-500
5.4.6 GROUND SERVICING CONNECTIONS
MODEL 737-600
5.4.7 GROUND SERVICING CONNECTIONS
MODEL 737-700
5.4.8 GROUND SERVICING CONNECTIONS
MODEL 737-700 WITH WINGLETS, 737 BBJ
5.4.9 GROUND SERVICING CONNECTIONS
MODEL 737-800
5.4.10 GROUND SERVICING CONNECTIONS
MODEL 737-800 WITH WINGLETS, 737 BBJ2
5.4.11 GROUND SERVICING CONNECTIONS
MODEL 737-900, -900ER
5.4.12 GROUND SERVICING CONNECTIONS
MODEL 737-900, -900ER WITH WINGLETS
<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>MODEL</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE FROM AIRPLANE CENTERLINE</th>
<th>MAX HEIGHT ABOVE GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FT-IN M</td>
<td>FT-IN M</td>
<td>FT-IN M FT-IN M FT-IN M</td>
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<td>CONDITIONED AIR</td>
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<td>33 - 2 10.1</td>
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<td>0 0 0 0 3 - 3 1.0</td>
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</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>737-500</td>
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<tr>
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<td>737-600</td>
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<tr>
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<tr>
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<td>- - 2 - 11 0.9 5 - 4 1.6</td>
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</tr>
<tr>
<td>ONE CONNECTION</td>
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<tr>
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<td>50 - 9 15.5</td>
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<tr>
<td>WING (SEE SEC 2.1 FOR</td>
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<td>- - 23 - 6 7.2 8 - 0 2.4</td>
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<td>48 - 8 14.8</td>
<td>- - 25 - 3 7.7 9 - 5 2.9</td>
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<td>TWO OVERWING FUEL PORTS</td>
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<tr>
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<td>- - 25 - 3 7.7 9 - 5 2.9</td>
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<td>TWO OVERWING FUEL PORTS</td>
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<td>55 - 1 16.8</td>
<td>34 - 3 10.4 34 - 3 10.4 9 - 4 2.8</td>
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<td>34 - 3 10.4 34 - 3 10.4 9 - 4 2.8</td>
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</tr>
<tr>
<td></td>
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<td>64 - 9 19.7</td>
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</tr>
<tr>
<td></td>
<td>737-500</td>
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<tr>
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<td>48 - 3 14.7 48 - 3 14.7</td>
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5.4.13 GROUND SERVICING CONNECTIONS AND CAPACITIES
MODEL 737, ALL MODELS
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<th>SYSTEM</th>
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<td>FT-IN M</td>
<td>FT-IN M</td>
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<tr>
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<td>737-100</td>
<td>11 - 8</td>
<td>3.6</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-200</td>
<td>11 - 8</td>
<td>3.6</td>
<td>-</td>
</tr>
<tr>
<td>ONE PRESSURE CONNECTION FOR DRAINING, FLUSHING, AND CHEMICAL FILLING – 17 GAL (64.3 L) CAPACITY</td>
<td>737-300</td>
<td>11 - 8</td>
<td>3.6</td>
<td>-</td>
</tr>
<tr>
<td>10-GPM (37.9 LPM) 20-PSIG (1.4 KG/SQ CM) SERVICE REQUIRED</td>
<td>737-400</td>
<td>11 - 8</td>
<td>3.6</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-500</td>
<td>11 - 8</td>
<td>3.6</td>
<td>-</td>
</tr>
<tr>
<td>LAVATORY</td>
<td>737-600</td>
<td>67 - 9</td>
<td>20.7</td>
<td>2 - 7</td>
</tr>
<tr>
<td></td>
<td>737-700</td>
<td>75 - 7</td>
<td>23.1</td>
<td>2 - 7</td>
</tr>
<tr>
<td>ONE CONNECTION FOR VACUUM LAVATORY</td>
<td>737-800</td>
<td>94 - 9</td>
<td>28.9</td>
<td>2 - 7</td>
</tr>
<tr>
<td></td>
<td>737-900</td>
<td>102 - 9</td>
<td>31.3</td>
<td>2 - 7</td>
</tr>
<tr>
<td>OXYGEN</td>
<td>737-100</td>
<td>21 - 8</td>
<td>6.6</td>
<td>-</td>
</tr>
<tr>
<td>ONE SERVICE CONNECTION FOR OXYGEN FILL – 153 CU FT (4.3 CU M) AT 3.000 PSIG (211 KG/SQ CM) OR 190 CU FT (5.4 CU M) WITH SECOND OBSERVER SEAT.</td>
<td>737-200</td>
<td>21 - 8</td>
<td>6.6</td>
<td>-</td>
</tr>
<tr>
<td>OXYGEN INDIVIDUAL CANISTERS IN EACH PASSENGER SERVICE UNIT</td>
<td>737-300</td>
<td>THRU</td>
<td>737-900</td>
<td></td>
</tr>
<tr>
<td>PNEUMATIC</td>
<td>737-100</td>
<td>34 - 2</td>
<td>10.4</td>
<td>-</td>
</tr>
<tr>
<td>ONE 3-IN (7.6 CM) PORT FOR ENGINE START AND AIRCONDITIONING PACKS</td>
<td>737-200</td>
<td>37 - 3</td>
<td>11.3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-300</td>
<td>40 - 10</td>
<td>12.5</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-400</td>
<td>46 - 10</td>
<td>14.3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-500</td>
<td>37 - 2</td>
<td>11.3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-600</td>
<td>37 - 1</td>
<td>11.3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-700</td>
<td>41 - 7</td>
<td>12.7</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-800</td>
<td>51 - 5</td>
<td>15.7</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>737-900</td>
<td>55 - 11</td>
<td>17.1</td>
<td>-</td>
</tr>
</tbody>
</table>

5.4.14 GROUND SERVICING CONNECTIONS AND CAPACITIES

MODEL 737, ALL MODELS
<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>MODEL</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE FROM AIRPLANE CENTERLINE</th>
<th>MAX HEIGHT ABOVE GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FT-IN M</td>
<td>FT-IN M</td>
<td>FT-IN M</td>
</tr>
<tr>
<td>POTABLE WATER</td>
<td>737-100</td>
<td>68 -11 21.0</td>
<td>1 - 0 0.3</td>
<td>- 6 4 1.9</td>
</tr>
<tr>
<td>TWO SERVICE CONNECTIONS</td>
<td>737-200</td>
<td>72 - 1 22.0</td>
<td>- - 4 - 8 1.4</td>
<td>10 - 4 3.2</td>
</tr>
<tr>
<td>0.75-IN (1.9 CM) AFT LOCATION OPTIONAL</td>
<td></td>
<td>75 - 3 22.9</td>
<td>1 - 0 0.3</td>
<td>- 6 - 4 1.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>78 - 6 23.9</td>
<td>- - 4 - 8 1.4</td>
<td>10 - 4 3.2</td>
</tr>
<tr>
<td>POTABLE WATER</td>
<td>737-300</td>
<td>84 - 9 25.8</td>
<td>1 - 0 0.3</td>
<td>4 - 8 1.4</td>
</tr>
<tr>
<td>ONE SERVICE CONNECTION</td>
<td>737-400</td>
<td>94 - 9 28.9</td>
<td>1 - 0 0.3</td>
<td>4 - 8 1.4</td>
</tr>
<tr>
<td>0.75-IN (1.9 CM)</td>
<td>737-500</td>
<td>75 - 3 22.9</td>
<td>1 - 0 0.3</td>
<td>4 - 8 1.4</td>
</tr>
<tr>
<td></td>
<td>737-600</td>
<td>73 - 1 22.3</td>
<td>- - 1 - 0 0.3</td>
<td>6 - 4 1.9</td>
</tr>
<tr>
<td></td>
<td>737-700</td>
<td>80 - 11 24.7</td>
<td>- - 1 - 0 0.3</td>
<td>6 - 4 1.9</td>
</tr>
<tr>
<td></td>
<td>737-800</td>
<td>100 - 1 30.5</td>
<td>- - 1 - 0 0.3</td>
<td>6 - 5 2.0</td>
</tr>
<tr>
<td></td>
<td>737-900</td>
<td>108 - 1 33.9</td>
<td>- - 1 - 0 0.3</td>
<td>6 - 5 2.0</td>
</tr>
</tbody>
</table>

NOTES:
- Distances rounded to the nearest inch and 0.1 meter.
- Airplane model designations also include all derivatives.
5.5.1 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 737-100, -200

NOTES:
* JTBD ENGINES
* MINIMUM STARTING REQUIREMENTS
* SEA LEVEL
* COORDINATE WITH USING AIRLINE
FOR SPECIFIC PLANNED
OPERATING PROCEDURES

EXAMPLE:
AMBIENT TEMPERATURE = 50°F (15°C)
GROUND CONNECTION TEMPERATURE = 250°F (121°C)
REQUIRED PRESSURE AT GROUND CONNECTION
= 47 PSIA (3.30 KG/SQ CM ABS)
REQUIRED AIRFLOW AT GROUND CONNECTION
= 77 LB/MIN (34.9 KGM/MIN)
5.5.2 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 737-300, -400, -500
5.5.3 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 737-600, -700, -800, -900, 737 BBJ, 737 BBJ2
5.6.1 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING

MODEL 737-100, -200
5.6.2 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING

MODEL 737-300, -500
5.6.3 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING

MODEL 737-400
5.6.4 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING
MODEL 737-600, -700

HEATING (PULL-UP)
- INITIAL CABIN TEMPERATURE - 0°F (-18°C)
- NO GALLEY LOAD
- NO ELECTRICAL LOAD
- \( W_{\text{CART}} = 1.25 \times W \)
- \( P = \) PRESSURE AT GROUND CONNECTION
- TEMP AT GROUND CONNECTION 200°F (66°C) TO 450°F (232°C)

COOLING (PULLDOWN)
- INITIAL CABIN TEMPERATURE - 103°F (39°C)
- OUTSIDE AIR TEMPERATURE - 103°F (39°C)
- SOLAR LOAD - 4,800 BTU/HR (1,210 KCAL/HR)
- NO GALLEY LOAD
- TEMP AT GROUND CONNECTION - LESS THAN 450°F (232°C)
- \( W_{\text{CART}} = 1.26 \times W \)
- \( P = \) PRESSURE AT GROUND CONNECTION, PSIG
- NO ELECTRICAL LOAD
- RH = RELATIVE HUMIDITY
5.6.5 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING

MODEL 737-800, -900
5.7.1 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737—100, -200

COOLING:

1. CABIN AT 75°F (24°C); 80 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 5,570 BTU/HR; ELECTRICAL LOAD 6,340 BTU/HR.
2. CABIN AT 80°F (27°C); OTHERWISE SAME AS IN 1.
3. CABIN AT 70°F (21°C); 3 CREW MEMBERS; GALLEY LOAD 6,200 BTU/HR; SOLAR LOAD 5,570 BTU/HR; ELECTRICAL LOAD 6,340 BTU/HR.
4. CABIN AT 85°F (29°C); 65 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 5,570 BTU/HR; ELECTRICAL LOAD 6,340 BTU/HR.

HEATING:

5. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
6. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
7. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
8. CABIN AT 75°F (24°C); 65 PASSENGERS AND CREW; NO GALLEY LOAD; NO SOLAR LOAD; ELECTRICAL LOAD 6,450 BTU/HR; PRECONDITIONED AIRPLANE.

\[ \Delta P_S = \text{GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION} \]

1 BTU/HR = 0.252 KG-CAL/HR

\[ \Delta P_S = 20 \text{ IN MAX} \]
\[ \Delta P_S = 18 \text{ IN} \]
\[ \Delta P_S = 16 \text{ IN} \]
\[ \Delta P_S = 14 \text{ IN} \]
\[ \Delta P_S = 12 \text{ IN} \]
\[ \Delta P_S = 9 \text{ IN} \]

NOTES:

* AIRFLOW REQUIREMENTS ARE SHOWN FOR THE 737-200 AIRPLANE AND ARE APPROXIMATELY 5 TO 10 LB/MIN GREATER THAN FOR THE 737-100, DEPENDING ON CONDITIONS AND LOADING
* MAXIMUM RECOMMENDED AIRFLOW = 160 LB/MIN (72 KG/MIN) TO AVOID OPENING OF THE DISTRIBUTION RELIEF VALVE

5.7.1 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737—100, -200
5.7.2 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737-300, -500
5.7.3 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737-400

COOLING:
1. CABIN AT 75°F (24°C); 165 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 7,741 BTU/HR; ELECTRICAL LOAD 10,955 BTU/HR.
2. CABIN AT 80°F (27°C); OTHERWISE SAME AS IN 1.
3. CABIN AT 70°F (21°C); 2 CREW MEMBERS; GALLEY LOAD 8,200 BTU/HR; SOLAR LOAD 7,741 BTU/HR; ELECTRICAL LOAD 10,955 BTU/HR.
4. CABIN AT 80°F (27°C); 117 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 7,741 BTU/HR; ELECTRICAL LOAD 10,955 BTU/HR; PRECONDITIONED AIRPLANE.

HEATING:
5. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
6. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
7. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
8. CABIN AT 75°F (24°C); 117 PASSENGERS AND CREW; NO GALLEY LOAD; NO SOLAR LOAD; ELECTRICAL LOAD 10,955 BTU/HR; PRECONDITIONED AIRPLANE.

ΔPС = GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.
1 BTU/HR = 0.252 KG-CAL/HR
5.7.4 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737-600, -700

COOLING:
1. CABIN AT 75°F (24°C); 138 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 4,800 BTU/HR; ELECTRICAL LOAD 6,984 BTU/HR.
2. CABIN AT 80°F (27°C); OTHERWISE SAME AS 1.
3. CABIN AT 70°F (21°C); 2 CREW MEMBERS; GALLEY LOAD 8,200 BTU/HR; SOLAR LOAD 4,800 BTU/HR; ELECTRICAL LOAD 6,984 BTU/HR.
4. CABIN AT 80°F (27°C); 98 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 4,800 BTU/HR; ELECTRICAL LOAD 6,984 BTU/HR. PRECONDITIONED AIRPLANE.

HEATING:
5. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
6. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
7. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
8. CABIN AT 75°F (24°C); 98 PASSENGERS AND CREW; NO GALLEY LOAD; NO SOLAR LOAD; ELECTRICAL LOAD 6,984 BTU/HR; PRECONDITIONED AIRPLANE.

ΔPᵣ = GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.
5.7.5 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737-800, -900

\[ \Delta P_s = \begin{cases} \text{17.1 IN MAX (NO RECIRC)} & \text{Cooling} \\ \text{10.5 IN (NO RECIRC)} & \text{Heating} \end{cases} \]

\[ \Delta P_s = \begin{cases} \text{14.5 IN MAX (WITH 2 RECIRC FANS ON)} & \text{Heating} \\ \text{10.7 IN (WITH 2 RECIRC FANS ON)} & \text{Cooling} \end{cases} \]

**Cooling:**
1. Cabin at 75°F (24°C): 185 passengers and crew; no galley load; solar load 7,741 BTU/hr; electrical load 10,955 BTU/hr.
2. Cabin at 80°F (27°C); otherwise same as in 1.
3. Cabin at 70°F (21°C); 2 crew members; galley load 8,200 BTU/hr; solar load 7,741 BTU/hr; electrical load 10,955 BTU/hr.
4. Cabin at 80°F (27°C); 117 passengers and crew; no galley load; solar load 7,741 BTU/hr; electrical load 10,955 BTU/hr; preconditioned airplane.

**Heating:**
5. Cabin at 75°F (24°C): no crew or passengers; no other heat loads.
6. Cabin at 75°F (24°C); no crew or passengers; no other heat loads.
7. Cabin at 75°F (24°C); no crew or passengers; no other heat loads.
8. Cabin at 75°F (24°C); 117 passengers and crew; no galley load; no solar load; electrical load 10,955 BTU/hr; preconditioned airplane.

\[ \Delta P_s = \text{GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.} \]
5.8.1 GROUND TOWING REQUIREMENTS - ENGLISH UNITS

MODEL 737, ALL MODELS
5.8.2 GROUND TOWING REQUIREMENTS - METRIC UNITS

MODEL 737, ALL MODELS
6.0 JET ENGINE WAKE AND NOISE DATA

6.1 Jet Engine Exhaust Velocities and Temperatures

6.2 Airport and Community Noise
6.0  JET ENGINE WAKE AND NOISE DATA

6.1  Jet Engine Exhaust Velocities and Temperatures

This section shows exhaust velocity and temperature contours aft of the 737 airplanes. The contours were calculated from a standard computer analysis using three-dimensional viscous flow equations with mixing of primary, fan, and free-stream flow. The presence of the ground plane is included in the calculations as well as engine tilt and toe-in. Mixing of flows from the engines is also calculated. The analysis does not include thermal buoyancy effects which tend to elevate the jet wake above the ground plane. The buoyancy effects are considered to be small relative to the exhaust velocity and therefore are not included.

The graphs show jet wake velocity and temperature contours are valid for sea level, static, standard day conditions. The effect of wind on jet wakes was not included. There is evidence to show that a downwind or an upwind component does not simply add or subtract from the jet wake velocity, but rather carries the whole envelope in the direction of the wind. Crosswinds may carry the jet wake contour far to the side at large distances behind the airplane.
6.1.1 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS

MODEL 737-100, -200

NOTES:
- STANDARD DAY
- ZERO WIND
- JT8D ENGINES
- SEA LEVEL
- STATIC AIRPLANE

HEIGHT ABOVE GROUND

FEET
0 10 20 30 40
METERS
0 10 20 30 40

AFT END OF AIRPLANE

3.3 FT (1.0 m)

FEET
0 20 40 60 80
METERS
0 10 20 30

AXIAL DISTANCE BEHIND AIRPLANE

FEET
0 20 40 60 80
METERS
0 10 20 30

DISTANCE FROM AIRPLANE CENTERLINE

FEET
0 10 20 30 40
METERS
0 10 20 30 40

70 MPH (110 KMPH)

35 MPH (56 KMPH)

70 MPH

35 MPH

GROUND PLANE

AIRPLANE
6.1.2 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS - IDLE THRUST
MODEL 737-300, -400, -500

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

HEIGHT ABOVE GROUND
0 10 20 30 40 50 60

FEET 12 24 36
METERS

AFT END
OF AIRPLANE

4 FT 0 IN (1.22 M)
7 FT 4 IN (2.24 M)

35 MPH (56 KMPH)

AXIAL DISTANCE BEHIND AIRPLANE
0 20 40 60 80 100 120 140 160 180 200 220

FEET
20 40 60 80
METERS
0 10 20 30 40

DISTANCE FROM AIRPLANE CENTRELINE
0 10 20 30 40
0 2 4 6 8

35 MPH

AIRPLANE
6.13 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS - IDLE THRUST
MODEL 737-600, -700, -800, -900, ALL MODELS

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

---

35 MPH (56 KMPH)
15 FT 9 IN (4.82 M)
12 FT 8 IN (3.87 M)
3 FT 7 IN (1.10 M)

---

35 MPH
6.1.4 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS
- BREAKAWAY THRUST

MODEL 737-100, -200
6.1.5 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS

MODEL 737-300, -400, -500

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

HEIGHT ABOVE GROUND
FEET
METERS

737-400
737-300
737-500

100 MPH (160 KMPH)
75 MPH (120 KMPH)
35 MPH (56 KMPH)
TO 510 FT (157 M)

4 FT 0 IN (1.22 M)
7 FT 4 IN (2.24 M)

GROUND PLANE

FEET
METERS
0 20 40 60 80 100 120 140 160 180 200 220

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTER LINE
FEET
METERS
0 10 20 30 40
0 2 4 6 8 10 12

100 MPH
75 MPH
35 MPH

© AIRPLANE
6.1.6 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS - BREAKAWAY THRUST

MODEL 737-600, -700, -800, -900 ALL MODELS

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

- 50 MPH (80 KMPH) TO 250 FT (76 M)
- 35 MPH (56 KMPH) TO 500 FT (152 M)

- 15 FT 9 IN (4.82 M)
- 12 FT 8 IN (3.87 M)
- 3 FT 7 IN (1.10 M)
6.17 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS

 TAKEOFF THRUST

MODEL 737-100, -200

NOTES:

- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

- JT8D-17 ENGINES. OTHER JT8D ENGINES EXHIBIT SMALLER VELOCITY CONTOURS

- 300 MPH (480 KM/H)
- 200 MPH (320 KM/H)
- 150 MPH (240 KM/H)
- 100 MPH (160 KM/H)
- 70 MPH (110 KM/H)
- 50 MPH TO 370 FT (80 KM/H TO 113 M)

- 3.3 FT (1.0 M)

GROUND PLANE

FEET 0 20 40 60 80 100 120 140 160 180 200 220
METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTERLINE 0 2 4 6 8 10 12
METERS 0 10 20 30 40

50 MPH 70 MPH

300 MPH 200 MPH

150 MPH 100 MPH

70 MPH

@ AIRPLANE
6.1.8 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS

MODEL 737-300, -400, -500

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

HEIGHT ABOVE GROUND

FEET

METERS

AFT END
OF AIRPLANE

GROUND PLANE

4 FT 0 IN (1.22 M)

7 FT 4 IN (2.24 M)

200 MPH (320 KMPH)

150 MPH (240 KMPH)

100 MPH (160 KMPH)

75 MPH (120 KMPH)

35 MPH (56 KMPH)

TO 1,900 FT (580 M)

AXIAL DISTANCE BEHIND AIRPLANE

FEET

METERS

DISTANCE FROM AIRPLANE CENTERLINE

FEET

METERS
6.1.9 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS
- TAKEOFF THRUST

MODEL 737-600, -700, -800, -900 ALL MODELS
6.1.10 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - IDLE THRUST

MODEL 737-100, -200

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

- 737-200
- 737-100

150°F (66°C) 100°F (38°C)

HEIGHT ABOVE GROUND METERS
0 10 20 30 40

AFT END OF AIRPLANE

3.3 FT (1.0 M)

GROUND PLANE

FEET 0 20 40 60 80 100 120 140 160 180 200 220

AXIAL DISTANCE BEHIND AIRPLANE

METERS 0 10 20 30 40 50 60 70

DISTANCE FROM AIRPLANE CENTERLINE

0 2 4 6 8 10

150°F 100°F

- AIRPLANE
6.1.11 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - IDLE THRUST

MODEL 737-300, -400, -500

NOTES:

- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

EXHAUST TEMPERATURES AFT OF AIRPLANE ARE LESS THAN 100° F (38° C) AT IDLE THRUST

AFT END OF AIRPLANE

GROUND PLANE

HEIGTH ABOVE GROUND

FEET

METERS

0

12

24

36

48

60

72

84

96

108

120

132

144

156

168

180

192

204

216

228

AXIAL DISTANCE BEHIND AIRPLANE

FEET

METERS

0

10

20

30

40

50

60

70

0

10

20

30

40

50

60

70

DISTANCE FROM AIRPLANE CENTERLINE

0

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

38

40

42

44

46

48

50

52

54

56

58

60

62

64

66

68

70

72

74
6.1.12 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS

MODEL 737-600, -700, -800, -900 ALL MODELS

EXHAUST TEMPERATURES AFT OF AIRPLANE
ARE LESS THAN 100° F (38° C)
AT BREAKAWAY THRUST

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

HEIGHT ABOVE GROUND

AFT END OF AIRPLANE

GROUND PLANE

FEET 0 20 40 60 80 100 120 140 160 180 200 220

METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTERLINE

\[\text{\& AIRPLANE}\]
6.1.13 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

MODEL 737-100, -200

OCTOBER 2005

GROUND PLANE

FEET 0 20 40 60 80 100 120 140 160 180 200 220
METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

HEIGHT ABOVE GROUND

FEET 0 5 10 15 20 25 30 35 40
METERS 0 1.5 3.0 4.5 6.0 7.5 9.0 10.5 12.0

AFT END OF AIRPLANE

3.3 FT (1.0 M)

Notes:

- JT8D-17 ENGINES

150°F (66°C)

100°F (38°C)
6.1.14 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS

-BREAKAWAY THRUST

NOTES:

○ STANDARD DAY
○ ZERO WIND
○ SEA LEVEL
○ STATIC AIRPLANE

EXHAUST TEMPERATURES AFT OF AIRPLANE
ARE LESS THAN 100°F (38°C)
AT IDLE THRUST

GROUND PLANE

HEIGHT ABOVE GROUND

FEET METERS

20 10
40 20
60 30
80 40
100 50
120 60
140 70
160
180
200
220

AXIAL DISTANCE BEHIND AIRPLANE

100°F

FEET METERS

20 10
40 20
60 30
80 40
100 50
120 60
140 70
160
180
200
220

DISTANCE FROM AIRPLANE CENTERLINE

0
2
4
6
8
10
12

© AIRPLANE
6.1.15  PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS

- BREAKAWAY THRUST

MODEL 737-600, -700, -800, -900 ALL MODELS

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

EXHAUST TEMPERATURES AFT OF AIRPLANE ARE LESS THAN 100°F (38°C) AT BREAKAWAY THRUST
6.1.16 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - TAKEOFF THRUST

MODEL 737-100, -200

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

JT8D-17 ENGINES, OTHER JT8D ENGINES EXHIBIT SMALLER VELOCITY CONTOURS

- 737-200
- 737-100

200°F (93°C) 150°F (66°C) 100°F TO 255 FT (38°F TO 78 M)

3.3 FT (1.0 M)

GROUND PLANE

FEET 0 20 40 60 80 100 120 140 160 180 200 220
METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTERLINE

FEET 0 40 80 120 160 200 240 280
METERS 0 12 24 36 48 60 72 84

200°F 150°F 100°F 0°F

AIRPLANE
6.1.17 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS
- TAKEOFF THRUST
MODEL 737-300, -400, -500
6.1.18  PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - TAKEOFF THRUST
MODEL 737-600, -700, -800, -900 ALL MODELS

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

100°F (38°C)

AFT END OF AIRPLANE

15 FT 9 IN (4.82 M)
12 FT 8 IN (3.87 M)
3 FT 7 IN (1.10 M)

HEIGHT ABOVE GROUND

FEET 0 20 40 60 80 100 120 140 160 180 200 220
METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

FEET 0 12 24 36 48 60 72
METERS 0 3.6 7.3 10.9 14.6 18.3 21.9

DISTANCE FROM AIRPLANE CENTERLINE

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70
6.2 Airport and Community Noise

Airport noise is of major concern to the airport and community planner. The airport is a major element in the community's transportation system and, as such, is vital to its growth. However, the airport must also be a good neighbor, and this can be accomplished only with proper planning. Since aircraft noise extends beyond the boundaries of the airport, it is vital to consider the impact on surrounding communities. Many means have been devised to provide the planner with a tool to estimate the impact of airport operations. Too often they oversimplify noise to the point where the results become erroneous. Noise is not a simple subject; therefore, there are no simple answers.

The cumulative noise contour is an effective tool. However, care must be exercised to ensure that the contours, used correctly, estimate the noise resulting from aircraft operations conducted at an airport.

The size and shape of the single-event contours, which are inputs into the cumulative noise contours, are dependent upon numerous factors. They include the following:

1. Operational Factors

   (a) **Aircraft Weight**-Aircraft weight is dependent on distance to be traveled, en route winds, payload, and anticipated aircraft delay upon reaching the destination.

   (b) **Engine Power Settings**-The rates of ascent and descent and the noise levels emitted at the source are influenced by the power setting used.

   (c) **Airport Altitude**-Higher airport altitude will affect engine performance and thus can influence noise.
2. Atmospheric Conditions-Sound Propagation

   (a) **Wind**—With stronger headwinds, the aircraft can take off and climb more rapidly relative to the ground. Also, winds can influence the distribution of noise in surrounding communities.

   (b) **Temperature and Relative Humidity**—The absorption of noise in the atmosphere along the transmission path between the aircraft and the ground observer varies with both temperature and relative humidity.

3. Surface Condition-Shielding, Extra Ground Attenuation (EGA)

   (a) **Terrain**—If the ground slopes down after takeoff or before landing, noise will be reduced since the aircraft will be at a higher altitude above ground. Additionally, hills, shrubs, trees, and large buildings can act as sound buffers.
All these factors can alter the shape and size of the contours appreciably. To demonstrate the effect of some of these factors, estimated noise level contours for two different operating conditions are shown below. These contours reflect a given noise level upon a ground level plane at runway elevation.

**Condition 1**

<table>
<thead>
<tr>
<th>Landing</th>
<th>Takeoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Structural Landing Weight</td>
<td>Maximum Gross Takeoff Weight</td>
</tr>
<tr>
<td>10-knot Headwind</td>
<td>Zero Wind</td>
</tr>
<tr>
<td>3° Approach</td>
<td>84 °F</td>
</tr>
<tr>
<td>84 °F</td>
<td>Humidity 15%</td>
</tr>
<tr>
<td>Humidity 15%</td>
<td></td>
</tr>
</tbody>
</table>

**Condition 2**

<table>
<thead>
<tr>
<th>Landing</th>
<th>Takeoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>85% of Maximum Structural Landing Weight</td>
<td>80% of Maximum Gross Takeoff Weight</td>
</tr>
<tr>
<td>10-knot Headwind</td>
<td>10-knot Headwind</td>
</tr>
<tr>
<td>3° Approach</td>
<td>59 °F</td>
</tr>
<tr>
<td>59 °F</td>
<td>Humidity 70%</td>
</tr>
<tr>
<td>Humidity 70%</td>
<td></td>
</tr>
</tbody>
</table>
As indicated from these data, the contour size varies substantially with operating and atmospheric conditions. Most aircraft operations are, of course, conducted at less than maximum gross weights because average flight distances are much shorter than maximum aircraft range capability and average load factors are less than 100%. Therefore, in developing cumulative contours for planning purposes, it is recommended that the airlines serving a particular city be contacted to provide operational information.

In addition, there are no universally accepted methods for developing aircraft noise contours or for relating the acceptability of specific zones to specific land uses. It is therefore expected that noise contour data for particular aircraft and the impact assessment methodology will be changing. To ensure that the best currently available information of this type is used in any planning study, it is recommended that it be obtained directly from the Office of Environmental Quality in the Federal Aviation Administration in Washington, D.C.

It should be noted that the contours shown herein are only for illustrating the impact of operating and atmospheric conditions and do not represent the single-event contour of the family of aircraft described in this document. It is expected that the cumulative contours will be developed as required by planners using the data and methodology applicable to their specific study.
7.0 PAVEMENT DATA

7.1 General Information
7.2 Landing Gear Footprint
7.3 Maximum Pavement Loads
7.4 Landing Gear Loading on Pavement
7.5 Flexible Pavement Requirements - U.S. Army Corps of Engineers Method S-77-1 and FAA Design Method
7.6 Flexible Pavement Requirements - LCN Conversion
7.7 Rigid Pavement Requirements - Portland Cement Association Design Method
7.8 Rigid Pavement Requirements - LCN Conversion
7.9 Rigid Pavement Requirements - FAA Design Method
7.10 ACN/PCN Reporting System - Flexible and Rigid Pavements
7.11 Tire Inflation Chart (737-100 thru -500 only)
7.0 PAVEMENT DATA

7.1 General Information

A brief description of the pavement charts that follow will help in their use for airport planning. Each airplane configuration is depicted with a minimum range of five loads imposed on the main landing gear to aid in interpolation between the discrete values shown. All curves for any single chart represent data based on rated loads and tire pressures considered normal and acceptable by current aircraft tire manufacturer's standards. Tire pressures, where specifically designated on tables and charts, are at values obtained under loaded conditions as certificated for commercial use.

Section 7.2 presents basic data on the landing gear footprint configuration, maximum design taxi loads, and tire sizes and pressures.

Maximum pavement loads for certain critical conditions at the tire-to-ground interface are shown in Section 7.3, with the tires having equal loads on the struts.

Pavement requirements for commercial airplanes are customarily derived from the static analysis of loads imposed on the main landing gear struts. The charts in Section 7.4 are provided in order to determine these loads throughout the stability limits of the airplane at rest on the pavement. These main landing gear loads are used as the point of entry to the pavement design charts, interpolating load values where necessary.

The flexible pavement design curves (Section 7.5) are based on procedures set forth in Instruction Report No. S-77-1, "Procedures for Development of CBR Design Curves," dated June 1977, and as modified according to the methods described in FAA Advisory Circular 150/5320-6D, "Airport Pavement Design and Evaluation," dated July 7, 1995. Instruction Report No. S-77-1 was prepared by the U.S. Army Corps of Engineers Waterways Experiment Station, Soils and Pavements Laboratory, Vicksburg, Mississippi. The line showing 10,000 coverages is used to calculate Aircraft Classification Number (ACN).
The following procedure is used to develop the curves, such as shown in Section 7.5:

1. Having established the scale for pavement depth at the bottom and the scale for CBR at the top, an arbitrary line is drawn representing 5,000 annual departures.

2. Values of the aircraft gross weight are then plotted.

3. Additional annual departure lines are drawn based on the load lines of the aircraft gross weights already established.

4. An additional line representing 10,000 coverages (used to calculate the flexible pavement Aircraft Classification Number) is also placed.

All Load Classification Number (LCN) curves (Sections 7.6 and 7.8) have been developed from a computer program based on data provided in International Civil Aviation Organization (ICAO) document 9157-AN/901, Aerodrome Design Manual, Part 3, “Pavements”, Second Edition, 1983. LCN values are shown directly for parameters of weight on main landing gear, tire pressure, and radius of relative stiffness ($I$) for rigid pavement or pavement thickness or depth factor ($h$) for flexible pavement.

Rigid pavement design curves (Section 7.7) have been prepared with the Westergaard equation in general accordance with the procedures outlined in the Design of Concrete Airport Pavement (1955 edition) by Robert G. Packard, published by the Portland Cement Association, 5420 Old Orchard Road, Skokie, Illinois 60077-1083. These curves are modified to the format described in the Portland Cement Association publication XP6705-2, Computer Program for Airport Pavement Design (Program PDILB), 1968, by Robert G. Packard.
The following procedure is used to develop the rigid pavement design curves shown in Section 7.7:

1. Having established the scale for pavement thickness to the left and the scale for allowable working stress to the right, an arbitrary load line is drawn representing the main landing gear maximum weight to be shown.

2. Values of the subgrade modulus (k) are then plotted.

3. Additional load lines for the incremental values of weight on the main landing gear are drawn on the basis of the curve for k = 300, already established.

The rigid pavement design curves (Section 7.9) have been developed based on methods used in the FAA Advisory Circular AC 150/5320-6D July 7, 1995. The following procedure is used to develop the curves, such as shown in Section 7.9:

1. Having established the scale for pavement flexure strength on the left and temporary scale for pavement thickness on the right, an arbitrary load line is drawn representing the main landing gear maximum weight to be shown at 5,000 coverages.

2. Values of the subgrade modulus (k) are then plotted.

3. Additional load lines for the incremental values of weight are then drawn on the basis of the subgrade modulus curves already established.

4. The permanent scale for the rigid-pavement thickness is then placed. Lines for other than 5,000 coverages are established based on the aircraft pass-to-coverage ratio.
The ACN/PCN system (Section 7.10) as referenced in ICAO Annex 14, "Aerodromes," 3rd Edition, July 1999, provides a standardized international airplane/pavement rating system replacing the various S, T, TT, LCN, AUW, ISWL, etc., rating systems used throughout the world. ACN is the Aircraft Classification Number and PCN is the Pavement Classification Number. An aircraft having an ACN equal to or less than the PCN can operate on the pavement subject to any limitation on the tire pressure. Numerically, the ACN is two times the derived single-wheel load expressed in thousands of kilograms, where the derived single wheel load is defined as the load on a single tire inflated to 181 psi (1.25 MPa) that would have the same pavement requirements as the aircraft. Computationally, the ACN/PCN system uses the PCA program PDILB for rigid pavements and S-77-1 for flexible pavements to calculate ACN values. The method of pavement evaluation is left up to the airport with the results of their evaluation presented as follows:

<table>
<thead>
<tr>
<th>PCN TYPE</th>
<th>PAVEMENT TYPE</th>
<th>SUBGRADE CATEGORY</th>
<th>TIRE PRESSURE CATEGORY</th>
<th>EVALUATION METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>R = Rigid</td>
<td></td>
<td>A = High</td>
<td>W = No Limit</td>
<td>T = Technical</td>
</tr>
<tr>
<td>F = Flexible</td>
<td></td>
<td>B = Medium</td>
<td>X = To 217 psi (1.5 MPa)</td>
<td>U = Using Aircraft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C = Low</td>
<td>Y = To 145 psi (1.0 MPa)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D = Ultra Low</td>
<td>Z = To 73 psi (0.5 MPa)</td>
<td></td>
</tr>
</tbody>
</table>

ACN values for flexible pavements are calculated for the following four subgrade categories:

- Code A - High Strength - CBR 15
- Code B - Medium Strength - CBR 10
- Code C - Low Strength - CBR 6
- Code D - Ultra Low Strength - CBR 3

ACN values for rigid pavements are calculated for the following four subgrade categories:

- Code A - High Strength, k = 550 pci (150 MN/m³)
- Code B - Medium Strength, k = 300 pci (80 MN/m³)
- Code C - Low Strength, k = 150 pci (40 MN/m³)
- Code D - Ultra Low Strength, k = 75 pci (20 MN/m³)
## 7.2.1 LANDING GEAR FOOTPRINT

**MODEL 737-100**

<table>
<thead>
<tr>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>MODEL 737-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>97,800</td>
</tr>
<tr>
<td>KG</td>
<td>44,361</td>
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</table>

### PERCENT OF WEIGHT ON MAIN GEAR

- SEE SECTION 7.4

<table>
<thead>
<tr>
<th>NOSE GEAR TIRE SIZE</th>
<th>IN</th>
<th>24 x 7.7 – 10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 PR</td>
<td>14 PR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOSE GEAR TIRE PRESSURE</th>
<th>PSI</th>
<th>135</th>
<th>135</th>
<th>145</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>9.49</td>
<td>9.49</td>
<td>10.19</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAIN GEAR TIRE SIZE</th>
<th>IN</th>
<th>40 x 14 – 16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 PR</td>
<td>22 PR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAIN GEAR TIRE PRESSURE</th>
<th>PSI</th>
<th>146</th>
<th>157</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>10.27</td>
<td>11.04</td>
<td></td>
</tr>
</tbody>
</table>
### Maximum Design Taxi Weight

<table>
<thead>
<tr>
<th></th>
<th>MODEL 737-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>100,800</td>
</tr>
<tr>
<td>KG</td>
<td>45,722</td>
</tr>
<tr>
<td></td>
<td>104,000</td>
</tr>
<tr>
<td></td>
<td>110,000</td>
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<tr>
<td></td>
<td>111,000</td>
</tr>
<tr>
<td></td>
<td>116,000</td>
</tr>
<tr>
<td>KG</td>
<td>47,174</td>
</tr>
<tr>
<td></td>
<td>49,895</td>
</tr>
<tr>
<td></td>
<td>50,349</td>
</tr>
<tr>
<td></td>
<td>52,617</td>
</tr>
</tbody>
</table>

### Percent of Weight on Main Gear

See Section 7.4

### Standard Tires and Brakes

#### Nose Gear Tire Size

<table>
<thead>
<tr>
<th>IN</th>
<th>24 x 7.7 – 10 14 PR</th>
<th>24 x 7.7 – 10 16 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>135</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>145</td>
<td>145</td>
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<tr>
<td></td>
<td>145</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>145</td>
<td>145</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>9.49</td>
<td>9.49</td>
</tr>
<tr>
<td></td>
<td>10.19</td>
<td>10.19</td>
</tr>
<tr>
<td></td>
<td>10.19</td>
<td>10.19</td>
</tr>
</tbody>
</table>
| Main Gear Tire Size

<table>
<thead>
<tr>
<th>IN</th>
<th>40 x 14 – 16 22 PR</th>
<th>40 x 14 – 16 24 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>141</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>156</td>
<td>157</td>
</tr>
<tr>
<td></td>
<td>158</td>
<td>158</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>9.91</td>
<td>10.27</td>
</tr>
<tr>
<td></td>
<td>10.97</td>
<td>11.04</td>
</tr>
<tr>
<td></td>
<td>11.04</td>
<td>11.67</td>
</tr>
</tbody>
</table>

### Heavy-Duty Tires and Brakes

#### Nose Gear Tire Size

<table>
<thead>
<tr>
<th>IN</th>
<th>24 x 7.7 – 10 16 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>145</td>
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<tr>
<td></td>
<td>145</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>10.19</td>
</tr>
<tr>
<td></td>
<td>10.19</td>
</tr>
<tr>
<td></td>
<td>10.19</td>
</tr>
<tr>
<td></td>
<td>10.19</td>
</tr>
</tbody>
</table>
| Main Gear Tire Size

<table>
<thead>
<tr>
<th>IN</th>
<th>C40 X 14 – 21 22 PR</th>
<th>C40 X 14 – 21 24 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>141</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>156</td>
<td>157</td>
</tr>
<tr>
<td></td>
<td>164</td>
<td></td>
</tr>
<tr>
<td>KG/CM²</td>
<td>9.91</td>
<td>10.27</td>
</tr>
<tr>
<td></td>
<td>10.97</td>
<td>11.04</td>
</tr>
<tr>
<td></td>
<td>11.04</td>
<td>11.53</td>
</tr>
</tbody>
</table>

### 7.2.2 Landing Gear Footprint

MODEL 737-200
### Maximum Design Taxi Weight

<table>
<thead>
<tr>
<th></th>
<th>Model Advanced 737-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>116,000</td>
</tr>
<tr>
<td>KG</td>
<td>52,617</td>
</tr>
</tbody>
</table>

### Percent of Weight on Main Gear

See Section 7.4

### Standard Tires and Brakes

<table>
<thead>
<tr>
<th>Nose Gear Tire Size</th>
<th>IN</th>
<th>24 x 7.7 – 10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>16 PR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nose Gear Tire Pressure</th>
<th>PSI</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>9.84</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Gear Tire Size</th>
<th>IN</th>
<th>C40 X 14 – 21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>24 PR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Gear Tire Pressure</th>
<th>PSI</th>
<th>166</th>
<th>168</th>
<th>172</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>11.67</td>
<td>11.81</td>
<td>12.09</td>
<td></td>
</tr>
</tbody>
</table>

### Heavy-Duty Tires and Brakes

<table>
<thead>
<tr>
<th>Nose Gear Tire Size</th>
<th>IN</th>
<th>24 x 7.7 – 10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>16 PR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nose Gear Tire Pressure</th>
<th>PSI</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>9.84</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Gear Tire Size</th>
<th>IN</th>
<th>C40 X 14 – 21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>24 PR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Gear Tire Pressure</th>
<th>PSI</th>
<th>164</th>
<th>166</th>
<th>170</th>
<th>178</th>
<th>182</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>11.53</td>
<td>11.67</td>
<td>11.95</td>
<td>12.52</td>
<td>12.80</td>
<td></td>
</tr>
</tbody>
</table>

### Low Pressure Tires

<table>
<thead>
<tr>
<th>Nose Gear Tire Size</th>
<th>IN</th>
<th>C24.5 x 18.5 – 12 12 PR</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Nose Gear Tire Pressure</th>
<th>PSI</th>
<th>104</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>7.31</td>
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</table>

<table>
<thead>
<tr>
<th>Main Gear Tire Size</th>
<th>IN</th>
<th>C40 X 18 - 17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20 PR</td>
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<table>
<thead>
<tr>
<th>Main Gear Tire Pressure</th>
<th>PSI</th>
<th>95</th>
<th>96</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>6.68</td>
<td>6.75</td>
<td></td>
</tr>
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</table>

### 7.2.3 Landing Gear Footprint

Model Advanced 737-200

---

434 October 2005
<table>
<thead>
<tr>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>737-300</th>
<th>737-400</th>
<th>737-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>125,000 TO 140,000</td>
<td>139,000</td>
<td>144,000</td>
</tr>
<tr>
<td>KG</td>
<td>56,699 TO 63,503</td>
<td>63,049</td>
<td>64,864</td>
</tr>
</tbody>
</table>

| PERCENT OF WEIGHT ON MAIN GEAR | SEE SECTION 7.4 |

<table>
<thead>
<tr>
<th>NOSE GEAR TIRE SIZE</th>
<th>IN</th>
<th>140</th>
<th>40 x 14 – 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOSE GEAR TIRE PRESSURE</td>
<td>PSI</td>
<td>166</td>
<td>171</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>11.67</td>
<td>12.02</td>
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</table>

<table>
<thead>
<tr>
<th>MAIN GEAR TIRE SIZE</th>
<th>IN</th>
<th>H40 x 14.5 – 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN GEAR TIRE PRESSURE (1)</td>
<td>PSI</td>
<td>180 TO 201</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>12.65 TO 14.13</td>
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<table>
<thead>
<tr>
<th>LOW PRESSURE TIRES</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOSE GEAR TIRE SIZE</td>
</tr>
<tr>
<td>NOSE GEAR TIRE PRESSURE</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>MAIN GEAR TIRE SIZE</td>
</tr>
<tr>
<td>MAIN GEAR TIRE PRESSURE (1)</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

NOTE: (1) SEE SEC 7.11 - TIRE INFLATION CHART, FOR TIRE PRESSURES AT INTERMEDIATE WEIGHTS.

7.2.4 LANDING GEAR FOOTPRINT
MODEL 737-300, -400, -500
### Maximum Design

<table>
<thead>
<tr>
<th>UNITS</th>
<th>737-600</th>
<th>737-700</th>
<th>737-800</th>
<th>737-900</th>
<th>737-900ER</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>124,500</td>
<td>133,500</td>
<td>156,000</td>
<td>164,500</td>
<td>164,500</td>
</tr>
<tr>
<td></td>
<td>THRU 145,000</td>
<td>THRU 155,000</td>
<td>THRU 174,700</td>
<td>THRU 188,200</td>
<td></td>
</tr>
<tr>
<td>KG</td>
<td>56,472</td>
<td>60,554</td>
<td>70,760</td>
<td>74,616</td>
<td>74,616</td>
</tr>
<tr>
<td></td>
<td>THRU 65,771</td>
<td>THRU 70,307</td>
<td>THRU 79,242</td>
<td>THRU 79,242</td>
<td>THRU 85,366</td>
</tr>
</tbody>
</table>

### Taxi Weight

<table>
<thead>
<tr>
<th>TAXI WEIGHT</th>
<th>UNITS</th>
<th>737-600</th>
<th>737-700</th>
<th>737-800</th>
<th>737-900</th>
<th>737-900ER</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN.</td>
<td>27 x 7.7 - 15</td>
<td>27 x 7.75 - 15</td>
<td>27 x 7.75 - 15</td>
<td>27 x 7.75 - 15</td>
<td>27 x 7.75 - 15</td>
<td></td>
</tr>
<tr>
<td>PSI</td>
<td>206</td>
<td>205</td>
<td>185</td>
<td>185</td>
<td>185</td>
<td></td>
</tr>
<tr>
<td>KG/CM²</td>
<td>14.50</td>
<td>14.44</td>
<td>13.03</td>
<td>13.03</td>
<td>13.03</td>
<td></td>
</tr>
</tbody>
</table>

### Nose Gear Tire Size

<table>
<thead>
<tr>
<th>TIRE SIZE</th>
<th>IN.</th>
<th>PSI</th>
<th>KG/CM²</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 x 7.7 - 15</td>
<td>206</td>
<td>205</td>
<td>185</td>
</tr>
<tr>
<td>27 x 7.75 - 15</td>
<td>14.50</td>
<td>14.44</td>
<td>13.03</td>
</tr>
</tbody>
</table>

### Main Gear Tire Size

<table>
<thead>
<tr>
<th>TIRE SIZE</th>
<th>IN.</th>
<th>PSI</th>
<th>KG/CM²</th>
</tr>
</thead>
<tbody>
<tr>
<td>24PR OR 26 PR</td>
<td>H43.5 x 16.0 - 21</td>
<td>182 THRU 205</td>
<td>12.80 THRU 14.41</td>
</tr>
<tr>
<td>28 PR</td>
<td>H44.5 x 16.0 - 21</td>
<td>197THRU 205</td>
<td>13.85 THRU 14.41</td>
</tr>
<tr>
<td>30 PR</td>
<td>H44.5 x 16.5 - 21</td>
<td>204 THRU 205</td>
<td>14.39 THRU 14.41</td>
</tr>
<tr>
<td>28 PR</td>
<td>H44.5 x 16.5 - 21</td>
<td>204THRU 205</td>
<td>14.34 THRU 14.41</td>
</tr>
<tr>
<td>30 PR</td>
<td>H44.5 x 16.5 - 21</td>
<td>205 THRU 220</td>
<td>14.41 THRU 15.47</td>
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</table>

### Optional Tires

<table>
<thead>
<tr>
<th>TIRE SIZE</th>
<th>IN.</th>
<th>PSI</th>
<th>KG/CM²</th>
</tr>
</thead>
<tbody>
<tr>
<td>28PR (1)</td>
<td>H44.5 x 16.5 - 21</td>
<td>168 THRU 205</td>
<td>11.81THRU 14.41</td>
</tr>
<tr>
<td>28PR (NOT AVAILABLE)</td>
<td>H44.5 x 16.5 - 21</td>
<td>179 THRU 205</td>
<td>12.59 THRU 14.41</td>
</tr>
</tbody>
</table>

**Note:** (1) H44.5 x 16.5 – 21 28PR TIRE CERTIFICATED ON 737-600 UP TO 144,000 LB (65,317 KG)

### 7.2.5 LANDING GEAR FOOTPRINT

*MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS*
### MAXIMUM DESIGN TAXI WEIGHT

<table>
<thead>
<tr>
<th></th>
<th>UNITS</th>
<th>737 BBJ</th>
<th>737 BBJ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td></td>
<td>171,500</td>
<td>174,700</td>
</tr>
<tr>
<td>KG</td>
<td></td>
<td>77,790</td>
<td>79,250</td>
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</table>

### PERCENT OF WEIGHT ON MAIN GEAR

- SEE SECTION 7.4

### NOSE GEAR TIRE SIZE

- IN. 27 x 7.7 - 15 12 PR

### NOSE GEAR TIRE PRESSURE

<table>
<thead>
<tr>
<th></th>
<th>PSI</th>
<th>185</th>
<th>185</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>13.03</td>
<td>13.03</td>
<td>13.03</td>
</tr>
</tbody>
</table>

### MAIN GEAR TIRE SIZE

- IN. H44.5 x 16.5 - 21 28 PR

### MAIN GEAR TIRE PRESSURE

<table>
<thead>
<tr>
<th></th>
<th>PSI</th>
<th>204</th>
<th>204</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/CM²</td>
<td>14.34</td>
<td>14.34</td>
<td>14.34</td>
</tr>
</tbody>
</table>

### 7.2.6 LANDING GEAR FOOTPRINT

*MODEL 737 BBJ, 737 BBJ2*
\[ V_{NG} = \text{MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY} \]
\[ V_{MG} = \text{MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY} \]
\[ H = \text{MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING} \]

**NOTE:** ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNITS</th>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>( V_{NG} )</th>
<th>( V_{MG} ) PER STRUT</th>
<th>( H ) PER STRUT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>MAXIMUM</td>
<td>AT STATIC + BRAKING</td>
<td>AT MAX LOAD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STATIC AT</td>
<td>10 FT/SEC² DECEL</td>
<td>10 FT/SEC² DECEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MOST FWD C.G.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STATIC +</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BRAKING 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FT/SEC² DECEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>737-100</td>
<td>LB</td>
<td>97,800</td>
<td>14,000</td>
<td>21,500</td>
<td>45,200</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>44,362</td>
<td>6,350</td>
<td>9,752</td>
<td>20,503</td>
</tr>
<tr>
<td>737-100,-200</td>
<td>LB</td>
<td>104,000</td>
<td>18,200</td>
<td>24,000</td>
<td>48,000</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>47,174</td>
<td>8,255</td>
<td>10,886</td>
<td>21,773</td>
</tr>
<tr>
<td>737-200,200</td>
<td>LB</td>
<td>111,000</td>
<td>17,700</td>
<td>25,600</td>
<td>51,000</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>50,349</td>
<td>8,029</td>
<td>11,612</td>
<td>23,133</td>
</tr>
<tr>
<td>737-200,200C</td>
<td>LB</td>
<td>116,000</td>
<td>16,500</td>
<td>25,200</td>
<td>52,800</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>52,617</td>
<td>7,484</td>
<td>11,143</td>
<td>23,950</td>
</tr>
<tr>
<td>737-200,200C</td>
<td>LB</td>
<td>117,500</td>
<td>15,800</td>
<td>23,500</td>
<td>54,500</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>53,298</td>
<td>7,167</td>
<td>10,660</td>
<td>24,721</td>
</tr>
<tr>
<td>737-200</td>
<td>LB</td>
<td>100,800</td>
<td>14,700</td>
<td>21,400</td>
<td>46,800</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>45,723</td>
<td>6,668</td>
<td>9,707</td>
<td>21,228</td>
</tr>
<tr>
<td>737-200</td>
<td>LB</td>
<td>110,000</td>
<td>16,100</td>
<td>24,000</td>
<td>51,000</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>49,896</td>
<td>7,303</td>
<td>10,886</td>
<td>23,133</td>
</tr>
<tr>
<td>737-200,200C</td>
<td>LB</td>
<td>120,000</td>
<td>16,500</td>
<td>24,500</td>
<td>55,600</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>54,432</td>
<td>7,484</td>
<td>11,113</td>
<td>25,220</td>
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<tr>
<td>737-200,200C</td>
<td>LB</td>
<td>125,000</td>
<td>16,400</td>
<td>24,700</td>
<td>57,900</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>56,700</td>
<td>7,439</td>
<td>11,204</td>
<td>26,263</td>
</tr>
<tr>
<td>737-200,200C</td>
<td>LB</td>
<td>128,600</td>
<td>14,200</td>
<td>22,800</td>
<td>59,100</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>58,333</td>
<td>6,441</td>
<td>10,342</td>
<td>26,808</td>
</tr>
</tbody>
</table>

7.3.1 MAXIMUM PAVEMENT LOADS

*MODEL 737-100, -200*
**V\_NG** = MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY  
**V\_MG** = MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY  
**H** = MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING  

NOTE: ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNITS</th>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>( V_NK )</th>
<th>( V_MG ) PER STRUT AT MAX LOAD</th>
<th>( H ) PER STRUT</th>
<th>( \mu = 0.8 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-300</td>
<td>LB</td>
<td>125,000</td>
<td>154,000</td>
<td>22,700</td>
<td>58,300</td>
<td>19,400</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>56,700</td>
<td>69,854</td>
<td>10,297</td>
<td>26,445</td>
<td>8,800</td>
</tr>
<tr>
<td>737-300</td>
<td>LB</td>
<td>130,500</td>
<td>15,300</td>
<td>23,100</td>
<td>60,600</td>
<td>20,300</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>59,194</td>
<td>6,940</td>
<td>10,478</td>
<td>27,488</td>
<td>9,208</td>
</tr>
<tr>
<td>737-300</td>
<td>LB</td>
<td>135,500</td>
<td>15,200</td>
<td>23,400</td>
<td>62,200</td>
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</tr>
<tr>
<td></td>
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<td>6,895</td>
<td>10,614</td>
<td>28,124</td>
<td>9,526</td>
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<td>LB</td>
<td>137,500</td>
<td>15,600</td>
<td>24,300</td>
<td>63,200</td>
<td>21,400</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>62,370</td>
<td>7,076</td>
<td>11,022</td>
<td>28,667</td>
<td>9,707</td>
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<tr>
<td>737-300</td>
<td>LB</td>
<td>139,000</td>
<td>15,600</td>
<td>24,400</td>
<td>63,600</td>
<td>21,600</td>
</tr>
<tr>
<td></td>
<td>KG</td>
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<td>7,076</td>
<td>11,068</td>
<td>28,849</td>
<td>9,798</td>
</tr>
<tr>
<td>737-300</td>
<td>LB</td>
<td>140,000</td>
<td>14,500</td>
<td>23,400</td>
<td>63,600</td>
<td>21,700</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>63,504</td>
<td>6,577</td>
<td>10,614</td>
<td>28,849</td>
<td>9,843</td>
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<tr>
<td>737-400</td>
<td>LB</td>
<td>139,000</td>
<td>15,900</td>
<td>23,000</td>
<td>64,900</td>
<td>21,600</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>63,050</td>
<td>7,212</td>
<td>10,433</td>
<td>29,438</td>
<td>9,798</td>
</tr>
<tr>
<td>737-400</td>
<td>LB</td>
<td>143,000</td>
<td>16,000</td>
<td>20,800</td>
<td>67,100</td>
<td>22,200</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>64,864</td>
<td>7,258</td>
<td>9,435</td>
<td>30,436</td>
<td>10,070</td>
</tr>
<tr>
<td>737-400</td>
<td>LB</td>
<td>144,000</td>
<td>12,200</td>
<td>19,700</td>
<td>66,900</td>
<td>22,400</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>65,318</td>
<td>5,534</td>
<td>8,936</td>
<td>30,346</td>
<td>10,161</td>
</tr>
<tr>
<td>737-500</td>
<td>LB</td>
<td>150,500</td>
<td>16,500</td>
<td>24,400</td>
<td>70,600</td>
<td>23,400</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>68,266</td>
<td>7,484</td>
<td>11,068</td>
<td>32,024</td>
<td>10,614</td>
</tr>
<tr>
<td>737-500</td>
<td>LB</td>
<td>116,000</td>
<td>17,100</td>
<td>25,000</td>
<td>53,700</td>
<td>18,000</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>52,617</td>
<td>7,757</td>
<td>11,340</td>
<td>24,358</td>
<td>8,165</td>
</tr>
<tr>
<td>737-500</td>
<td>LB</td>
<td>125,000</td>
<td>17,300</td>
<td>25,800</td>
<td>57,700</td>
<td>19,400</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>56,700</td>
<td>7,847</td>
<td>11,703</td>
<td>26,173</td>
<td>8,800</td>
</tr>
<tr>
<td>737-500</td>
<td>LB</td>
<td>134,000</td>
<td>17,300</td>
<td>26,400</td>
<td>61,800</td>
<td>20,800</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>60,781</td>
<td>7,847</td>
<td>11,975</td>
<td>28,032</td>
<td>9,435</td>
</tr>
</tbody>
</table>

### 7.3.2 MAXIMUM PAVEMENT LOADS

*MODEL 737-300, -400, -500*
**V_{NG}** = MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY

**V_{MG}** = MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY

**H** = MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING

**NOTE:** ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNITS</th>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th><strong>V_{NG}</strong></th>
<th><strong>V_{MG}</strong></th>
<th><strong>H</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>VERTICAL AT</td>
<td>MAXIMUM LOAD AT</td>
<td>LOAD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MOST FWD C.G.</td>
<td>STATIC + BRAKING 10 FT/SEC² DECEL</td>
<td>INSTANTANEOUS BRAKING</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STATIC AT</td>
<td>26,489</td>
<td>19,298</td>
</tr>
<tr>
<td>737-600</td>
<td>LB</td>
<td>124,500</td>
<td>16,839</td>
<td>58,333</td>
<td>19,298</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>56,472</td>
<td>7,638</td>
<td>26,459</td>
<td>8,708</td>
</tr>
<tr>
<td>737-600</td>
<td>LB</td>
<td>144,000</td>
<td>19,020</td>
<td>66,708</td>
<td>22,320</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>65,317</td>
<td>8,627</td>
<td>30,258</td>
<td>10,124</td>
</tr>
<tr>
<td>737-600</td>
<td>LB</td>
<td>145,000</td>
<td>19,000</td>
<td>66,454</td>
<td>22,475</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>65,771</td>
<td>8,618</td>
<td>30,143</td>
<td>10,194</td>
</tr>
<tr>
<td>737-700</td>
<td>LB</td>
<td>133,500</td>
<td>17,558</td>
<td>63,000</td>
<td>20,692</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>60,554</td>
<td>7,963</td>
<td>28,576</td>
<td>9,386</td>
</tr>
<tr>
<td>737-700</td>
<td>LB</td>
<td>153,500</td>
<td>18,740</td>
<td>71,482</td>
<td>23,792</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>69,626</td>
<td>8,500</td>
<td>32,424</td>
<td>10,792</td>
</tr>
<tr>
<td>737-700</td>
<td>LB</td>
<td>155,000</td>
<td>16,925</td>
<td>71,060</td>
<td>24,025</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>70,307</td>
<td>7,677</td>
<td>28,406</td>
<td>9,868</td>
</tr>
<tr>
<td>737-800</td>
<td>LB</td>
<td>156,000</td>
<td>16,770</td>
<td>75,062</td>
<td>24,180</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>70,750</td>
<td>7,607</td>
<td>34,047</td>
<td>10,968</td>
</tr>
<tr>
<td>737-800</td>
<td>LB</td>
<td>173,000</td>
<td>17,059</td>
<td>82,143</td>
<td>26,815</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>78,471</td>
<td>7,738</td>
<td>37,259</td>
<td>12,163</td>
</tr>
<tr>
<td>737-800</td>
<td>LB</td>
<td>174,700</td>
<td>15,100</td>
<td>81,730</td>
<td>27,078</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>79,242</td>
<td>6,849</td>
<td>37,060</td>
<td>12,282</td>
</tr>
<tr>
<td>737-900</td>
<td>LB</td>
<td>164,500</td>
<td>14,998</td>
<td>78,962</td>
<td>25,498</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>74,616</td>
<td>6,803</td>
<td>35,817</td>
<td>11,566</td>
</tr>
<tr>
<td>737-900</td>
<td>LB</td>
<td>174,700</td>
<td>14,155</td>
<td>81,743</td>
<td>27,078</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>79,242</td>
<td>6,421</td>
<td>37,078</td>
<td>12,282</td>
</tr>
<tr>
<td>737-900ER</td>
<td>LB</td>
<td>188,200</td>
<td>15,206</td>
<td>88,993</td>
<td>29,227</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>85,366</td>
<td>6,897</td>
<td>40,367</td>
<td>13,257</td>
</tr>
</tbody>
</table>

### 7.3.3 MAXIMUM PAVEMENT LOADS

MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS
\[ V_{NG} = \text{MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY} \]

\[ V_{MG} = \text{MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY} \]

\[ H = \text{MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING} \]

\textit{NOTE: ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
\textbf{MODEL} & \textbf{UNITS} & \textbf{MAXIMUM DESIGN TAXI WEIGHT} & \textbf{\( V_{NG} \) STATIC AT MOST FWD C.G.} & \textbf{\( V_{NG} \) STATIC + BRAKING 10 FT/SEC\(^2\) DECEL} & \textbf{\( V_{MG} \) PER STRUT AT MAX LOAD AT STATIC AFT C.G.} & \textbf{\( H \) PER STRUT AT INSTANTANEOUS BRAKING (\( \mu = 0.8 \))} \\
\hline
737 BBJ & LB & 171,500 & 17,400 & 29,400 & 78,700 & 26,600 & 62,900 \\
 & KG & 77,800 & 7,900 & 13,340 & 35,700 & 12,100 & 28,550 \\
737 BBJ2 & LB & 174,700 & 15,100 & 24,900 & 81,700 & 27,100 & 65,400 \\
 & KG & 79,250 & 6,850 & 11,300 & 37,050 & 12,300 & 29,650 \\
\hline
\end{tabular}
\end{table}

\textit{7.3.4 MAXIMUM PAVEMENT LOADS}

\textit{MODEL 737 BBJ, 737 BBJ2}
7.4.1 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-100
7.4.2 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-200
7.4.3 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-200 ADVANCED
7.4.4 LANDING GEAR LOADING ON PAVEMENT

MODEL 737-300
7.4.5 LANDING GEAR LOADING ON PAVEMENT

MODEL 737-400
7.4.6 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-500
7.4.7 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-600
7.4.8 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-700, -700 WITH WINGLETS
7.4.9 LANDING GEAR LOADING ON PAVEMENT

MODEL 737 BBJ
7.4.10 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-800, -800 WITH WINGLETS
7.4.11 LANDING GEAR LOADING ON PAVEMENT
MODEL 737 BBJ2
7.4.12 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-900, -900 WITH WINGLETS
7.4.13 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-900ER, -900ER WITH WINGLETS
7.5 Flexible Pavement Requirements - U.S. Army Corps of Engineers Method (S-77-1) and FAA Design Method

The following flexible-pavement design chart presents the data of five incremental main-gear loads at the minimum tire pressure required at the maximum design taxi weight.

In the example shown in the next page, for a CBR of 25 and an annual departure level of 10,000, the required flexible pavement thickness for an airplane with a main gear loading of 85,000 pounds is 8.2 inches. Similar examples are shown in succeeding charts.

The line showing 10,000 coverages is used for ACN calculations (see Section 7.10).

The FAA design method uses a similar procedure using total airplane weight instead of weight on the main landing gears. The equivalent main gear loads for a given airplane weight could be calculated from Section 7.4.
7.5.1 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD

MODEL 737-100, -200 TO 104,000 LB (47,170 KG) MTW

FLEXIBLE PAVEMENT THICKNESS, h

NOTES:
* TIRES - 40 x 14 - 16 28 PR; C40 x 14 - 21 22 PR
* PRESSURE RANGE FROM 138 TO 146 PSI (9.70 TO 10.27 KG/SC CM)
7.5.2 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD

MODEL 737-100, -200, -200 ADV AT 110,000 TO 117,500 LB (49,895 TO 53,297 KG) MTW

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7.5.3 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD
MODEL 737-200 ADV AT 116,000 TO 117,500 LB (52,617 TO 53,297 KG) MTW, LOW PRESSURE TIRES

NOTES:
* TIRES - C40 x 18 - 17 20 PR
* PRESSURE RANGE AT 95 OR 96 PSI (6.68 OR 6.75 KG/SC CM)
NOTES:
- TIRES - C40 x 18 - 17 20 PR
- PRESSURE RANGE AT 95 OR 96 PSI (6.68 OR 6.75 KG/SC CM)

WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4)

| LB (KG) | 109,000 (49,441) | 90,000 (40,823) | 70,000 (31,751) | 50,000 (22,680) |

ANNUAL DEPARTURES

- 1,200
- 5,000
- 10,000
- 15,000
- 25,000
- 20-YEAR PAVEMENT LIFT

10,000 COVERAGE (USED FOR ACN CALCULATIONS)

FLEXIBLE PAVEMENT THICKNESS, h

7.5.4 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD

MODEL 737-200 ADV AT 120,000 TO 128,600 LB (54,431 TO 58,332 KG) MTW

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7.5.5 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD

MODEL 737-300, -400, -500

NOTE:
* TIRES – H40 x 14.5 - 19 24 PR, 26 PR, H42 x 16-19 24 PR, 26 PR

CALIFORNIA BEARING RATIO, CBR

WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4)
LB (KG)
141,200 (64,047)
120,000 (54,431)
100,000 (45,359)
80,000 (36,287)
60,000 (27,215)

ANNUAL DEPARTURES
1,200
5,000
10,000
15,000
25,000

*20-YEAR PAVEMENT LIFE

10,000 COVERAGE (USED FOR AGN CALCULATIONS)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT C.G. (155,500 LB MTW)

FLEXIBLE PAVEMENT THICKNESS, h
7.5.6 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD

MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS, 737 BBJ, 737 BBJ2
7.6 Flexible Pavement Requirements - LCN Method

To determine the airplane weight that can be accommodated on a particular flexible pavement, both the Load Classification Number (LCN) of the pavement and the thickness must be known.

In the example shown on the next page, flexible pavement thickness is shown at 23.75 in. with an LCN of 42. For these conditions, the apparent maximum allowable weight permissible on the main landing gear is 85,000 lb for an airplane with 138 to 146-psi main gear tires. Similar examples are shown in succeeding charts.

Note: If the resultant aircraft LCN is not more than 10% above the published pavement LCN, the bearing strength of the pavement can be considered sufficient for unlimited use by the airplane. The figure 10% has been chosen as representing the lowest degree of variation in LCN that is significant (reference: ICAO Aerodrome Manual, Part 2, "Aerodrome Physical Characteristics," Chapter 4, Paragraph 4.1.5.7v, 2nd Edition dated 1965).
7.6.1 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD
MODEL 737-100, -200 AT 104,000 LB (47,174 KG) MTW
7.6.2 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD

MODEL 737-100, -200, -200 ADV AT 110,000 TO 117,500 LB (49,895 TO 53,297 KG) MTW
7.6.3 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD
MODEL 737-200 ADV AT 116,000 TO 117,500 LB (52,617 TO 53,297 KG) MTW, LOW PRESSURE TIRES
**NOTES:**

- TIRES - H40 x 14 - 16 24PR, C40 x 14 - 21 24 PR OR 26 PR; H40 x 14.5 - 19 24 PR
- TIRE PRESSURE RANGE FROM 170 TO 182 PSI (11.95 TO 12.80 KG/SQ CM)

**MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT CG (128,600 LB)**

**WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4)**
- 118,400 (53,615)
- 100,000 (43,539)
- 80,000 (36,287)
- 60,000 (27,215)

**EQUIVALENT SINGLE-WHEEL LOAD (Kg)**

**INCHES**

**CENTIMETERS**

**FLEXIBLE PAVEMENT THICKNESS, h**

**LOAD CLASSIFICATION NUMBER (LCN)**
7.6.5 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD
MODEL 737-300, -400, -500
NOTES:
* TIRES = H44.5 x 18.5 - 21 30PR, TIRE PRESSURE 220 PSI (15.47 KG/SQ CM)
* EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM
  ICAO AERODROME MANUAL, PART 2 PAR. 4.1.3, DATED 1965.
7.7 Rigid Pavement Requirements - Portland Cement Association Design Method

The Portland Cement Association method of calculating rigid pavement requirements is based on the computerized version of "Design of Concrete Airport Pavement" (Portland Cement Association, 1965) as described in XP6705-2, "Computer Program for Airport Pavement Design" by Robert G. Packard, Portland Cement Association, 1968.

The following rigid pavement design chart presents the data for five incremental main gear loads at the minimum tire pressure required at the maximum design taxi weight.

In the example shown on the next page, for an allowable working stress of 400 psi, a main gear load of 70,000 lb, and a subgrade strength (k) of 300, the required rigid pavement thickness is 7.7 in. Similar examples are shown in succeeding charts.
7.7.1 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

MODEL 737: 100, 200 TO 104,000 LB (47,170 KG) MTW

NOTES:
- TRES - 140 X 14 - 16 22 PB 140 X 14 - 2 22PB
- PRESSURE RANGE FROM 138 TO 146 PSI (9.7 TO 10.27 KG/SQ CM)

REFERENCES:
- DESIGN = PROGRAM PUBLICATION
- DESIGN = PROGRAM PUBLICATION
- DESIGN = PROGRAM PUBLICATION

PAVEMENT THICKNESS
(CENTIMETERS)

INCHES

6 10 12 14 16 18 20

NOTE: THE VALUES OBTAINED BY USING THE ANY VALUE OF K ARE EXACT AND CURVES FOR LOADS LESS THAN MAXIMUM THE CURVES ARE EXACT FOR K = 300 BUT DEVIATE SLIGHTLY FOR OTHER VALUES OF K.

200 300 400 500 600 700 800

15 20 25 30 35 40 45 50

(PSI)

(KG/SQ CM)

ALLOWABLE WORKING STRESS

MAXIMUM POSSIBLE MAIN DESIGN TAX WEIGHT AND ACT CG (104,000 LB MTW)

WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4)

(44,815 LB)

(30,835)

(24,960)

(19,080)

(13,200)

(8,320)

(3,440)

(2,560)

(1,680)

(0,800)

(0,000)

98,800

93,800

89,800

85,800

81,800

77,800

73,800

69,800

65,800

61,800

57,800

53,800

49,800

45,800

41,800

37,800

33,800

29,800

25,800

21,800

17,800

13,800

9,800

5,800

1,800

0,800

0,000

MODEL 737: 100, 200 TO 104,000 LB (47,170 KG) MTW

NOTE: TRES - 140 X 14 - 16 22 PB 140 X 14 - 2 22PB
- PRESSURE RANGE FROM 138 TO 146 PSI (9.7 TO 10.27 KG/SQ CM)
7.7.2 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

MODEL 737-100, -200, ADVANCED 737-200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW
NOTES:

* TIRES - C40 x 18 - 17 20 PR
* PRESSURE AT 95 OR 96 PSI (6.88 OR 6.75 KG/SQ CM)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT C.G. (117,400 LB MTW)

WEIGHT ON MAIN LANDING GEAR
(SEE SEC 7.4)
LB (KG)
109,000 (49,441)
90,000 (40,823)
70,000 (31,751)
50,000 (22,660)

NOTE: THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUE OF k ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR k = 300 BUT DEVIATE SLIGHTLY FOR OTHER VALUES OF k.

REFERENCES:
"DESIGN OF CONCRETE AIRPORT PAVEMENT" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN - PROGRAM PDILB" PORTLAND CEMENT ASSOCIATION.

7.7.3 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL ADV 737-200 AT 116,000 TO 117,500 LB (52,610 TO 53,290 KG) MTW (LOW PRESSURE TIRES)

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7.7.4 Rigid Pavement Requirements - Portland Cement Association Design Method

Model ADV 737-200 at 120,000 to 128,000 lb (54,430 to 58,330 kg) MTW
7.7.5 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL 737-300, -400, -500

NOTES:
- TRES - H40 x 14.5-19 24PR, 26PR; H42 x 16-19 26PR

REFERENCES:
"DESIGN OF CONCRETE AIRPORT PAVEMENT" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN - PROGRAM POLE" PORTLAND CEMENT ASSOCIATION.

The values obtained by using the maximum load reference line and any value of k are exact. For loads less than maximum, the curves are exact for k = 300 but deviate slightly for other values of k.
7.7.5 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

MODEL 737-300, -400, -500 (LOW PRESSURE TIRES)

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7.7.6 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS, 737 BBJ, 737 BBJ2
7.7.7 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL 737-600, -700 (OPTIONAL TIRES)
7.8  Rigid Pavement Requirements - LCN Conversion

To determine the airplane weight that can be accommodated on a particular rigid pavement, both the LCN of the pavement and the radius of relative stiffness (t) of the pavement must be known.

In the example shown in Section 7.8.2, for a rigid pavement with a radius of relative stiffness of 40 with an LCN of 42.5, the maximum allowable weight permissible on the main landing gear is 85,000 lb. Similar examples are shown in succeeding charts.

Note: If the resultant aircraft LCN is not more that 10% above the published pavement LCN, the bearing strength of the pavement can be considered sufficient for unlimited use by the airplane. The figure 10% has been chosen as representing the lowest degree of variation in LCN that is significant (reference: ICAO Aerodrome Manual, Part 2, "Aerodrome Physical Characteristics," Chapter 4, Paragraph 4.1.5.7v, 2nd Edition dated 1965).
RADIUS OF RELATIVE STIFFNESS (\(r\))
VALUES IN INCHES

WHERE:  
- \(E = \) YOUNG’S MODULUS OF ELASTICITY = 4 x 10^6 psi
- \(k = \) SUBGRADE MODULUS, LB PER CU IN
- \(d = \) RIGID PAVEMENT THICKNESS, IN
- \(\mu = \) POISSON’S RATIO = 0.15

\[
\begin{align*}
\text{d} & \quad 75 & 100 & 150 & 200 & 250 & 300 & 350 & 400 & 500 & 550 \\
7.5 & 37.21 & 34.63 & 31.29 & 29.12 & 27.54 & 26.31 & 25.32 & 24.49 & 23.16 & 22.61 \\
8.0 & 39.06 & 36.35 & 32.84 & 30.56 & 28.91 & 27.62 & 26.57 & 25.70 & 24.31 & 23.73 \\
8.5 & 40.87 & 38.04 & 34.37 & 31.99 & 30.25 & 28.90 & 27.81 & 26.90 & 25.44 & 24.84 \\
9.5 & 44.43 & 41.35 & 37.36 & 34.77 & 32.88 & 31.42 & 30.23 & 29.24 & 27.65 & 27.00 \\
10.0 & 46.17 & 42.97 & 38.83 & 36.13 & 34.17 & 32.65 & 31.41 & 30.38 & 28.73 & 28.06 \\
10.5 & 47.89 & 44.57 & 40.27 & 37.48 & 35.44 & 33.87 & 32.58 & 31.52 & 29.81 & 29.10 \\
11.0 & 49.59 & 46.15 & 41.70 & 38.81 & 36.70 & 35.07 & 33.74 & 32.63 & 30.86 & 30.14 \\
11.5 & 51.27 & 47.72 & 43.12 & 40.12 & 37.95 & 36.26 & 34.89 & 33.74 & 31.91 & 31.16 \\
12.0 & 52.94 & 49.26 & 44.51 & 41.43 & 39.18 & 37.43 & 36.02 & 34.83 & 32.94 & 32.17 \\
12.5 & 54.58 & 50.80 & 45.90 & 42.71 & 40.40 & 38.60 & 37.14 & 35.92 & 33.97 & 33.17 \\
13.0 & 56.21 & 52.31 & 47.27 & 43.99 & 41.60 & 39.75 & 38.25 & 36.99 & 34.98 & 34.16 \\
13.5 & 57.83 & 53.81 & 48.83 & 45.25 & 42.80 & 40.89 & 39.34 & 38.05 & 35.99 & 35.14 \\
14.0 & 59.43 & 55.30 & 49.97 & 46.50 & 43.98 & 42.02 & 40.43 & 39.10 & 36.98 & 36.11 \\
14.5 & 61.01 & 56.78 & 51.30 & 47.74 & 45.15 & 43.14 & 41.51 & 40.15 & 37.97 & 37.07 \\
15.0 & 62.58 & 58.24 & 52.62 & 48.97 & 46.32 & 44.25 & 42.58 & 41.18 & 38.95 & 38.03 \\
15.5 & 64.14 & 59.69 & 53.93 & 50.19 & 47.47 & 45.35 & 43.64 & 42.11 & 39.92 & 39.04 \\
16.0 & 65.69 & 61.13 & 55.23 & 51.40 & 48.61 & 46.45 & 44.69 & 43.22 & 40.88 & 39.92 \\
16.5 & 67.22 & 62.55 & 56.52 & 52.60 & 49.75 & 47.53 & 45.73 & 43.77 & 41.83 & 40.85 \\
17.0 & 68.74 & 63.97 & 57.80 & 53.79 & 50.87 & 48.61 & 46.77 & 45.23 & 42.78 & 41.77 \\
17.5 & 70.25 & 65.38 & 59.07 & 54.97 & 51.99 & 49.68 & 47.80 & 46.23 & 43.72 & 42.69 \\
18.0 & 71.75 & 66.77 & 60.34 & 56.15 & 53.10 & 50.74 & 48.82 & 47.22 & 44.65 & 43.60 \\
19.0 & 74.72 & 69.54 & 62.83 & 58.47 & 55.30 & 52.84 & 50.84 & 49.17 & 46.50 & 45.41 \\
20.0 & 77.65 & 72.26 & 65.30 & 60.77 & 57.47 & 54.91 & 52.83 & 51.10 & 48.33 & 47.19 \\
21.0 & 80.55 & 74.96 & 67.73 & 60.33 & 57.91 & 55.61 & 53.09 & 50.30 & 48.13 & 46.95 \\
22.0 & 83.41 & 77.62 & 70.14 & 65.27 & 61.73 & 58.98 & 56.75 & 54.88 & 52.11 & 50.68 \\
23.0 & 86.23 & 80.25 & 72.51 & 67.48 & 63.82 & 60.98 & 58.67 & 56.74 & 53.67 & 52.40 \\
24.0 & 89.03 & 82.85 & 74.86 & 69.67 & 65.89 & 62.95 & 60.57 & 58.58 & 55.41 & 54.10 \\
25.0 & 91.80 & 85.43 & 77.19 & 71.84 & 67.94 & 64.91 & 62.46 & 60.41 & 57.13 & 55.78 \\
\end{align*}
\]
7.8.2 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

MODEL 737-100, -200 TO 104,000 LB (47,170 KG) MTW

NOTES:  
* TIRES - 40x14-16 22PR; C40x14-21 22PR  
* PRESSURE RANGE FROM 138 TO 146 PSI (9.70 TO 10.27 KG/SQ CM)  
* EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM ICAO AERODROME MANUAL, PART 2 PAR 4.1.3, DATED 1965.

Maximum possible main gear load at maximum design taxi weight and aft CG (104,000 lb MTW).

Weight on main landing gear (see Sec. 7.4)  
- 98,800 lb (44,815 kg)  
- 85,000 lb (38,555 kg)  
- 70,000 lb (31,751 kg)  
- 55,000 lb (24,848 kg)

Graph showing equivalent single-wheel load vs. radius of relative stiffness (inches) and load classification number (LCN)
7.8.3 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION
MODEL 737-100, -200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW

NOTES:
• TIRES - 40x14-15 24PR; 640x14-21 24PR
• PRESSURE RANGE FROM 156 TO 168 PSI (10.97 TO 11.81 KG/SQ CM)
• EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM
  ICAO AERODROME MANUAL, PART 2 PAR 4.1.3, DATED 1965.
7.8.4 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

MODEL ADV 737-200 AT 116,000 TO 117,500 LB (52,610 TO 53,290 KG) MTW (LOW PRESSURE TIRES)

NOTES:
- Tires - C44x16-17 ZOPPR
- Pressure at 95 or 98 psi (6.68 or 6.75 kg/29 cm)
- Equivalent single-wheel loads are derived from ICAO Aerodrome Manual, Part 2, Par 4.1.3, Dated 1965.

7.8.4 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

MODEL ADV 737-200 AT 116,000 TO 117,500 LB (52,610 TO 53,290 KG) MTW (LOW PRESSURE TIRES)
7.8.6 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION
MODEL 737-300, -400, -500
7.9 Rigid Pavement Requirements - FAA Design Method

The following rigid pavement design charts present data on five incremental main gear loads at the minimum tire pressure required at the maximum design taxi weight.

In the example shown in the next page, the pavement flexural stress is shown at 700 psi, the subgrade strength is shown at k = 550, and the annual departure level is 6,000. For these conditions, the required rigid pavement thickness for an airplane with main gear load of 100,000 pounds is 10.4 inches. Similar examples are shown in succeeding charts.
7.9.1 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD
MODEL 737-100, -200
7.9.3 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD
MODEL 737-300, -400, -500
7.9.4 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD
MODEL 737-300, -400, -500 (LOW PRESSURE TIRES)
7.9.5 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD
MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS, 737 BBJ, 737 BBJ2
7.9.6 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD

MODEL 737-600, -700 (OPTIONAL TIRES)

NOTE: TIRE PRESSURE CONSTANT AT 185 PSI (13.01 KG/SQ CM)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT C.G. (155,000 LB MTW)

WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4)

LB (KG)
-142,135 (64,571)
-135,200 (61,325)
-115,900 (52,571)

96,550 (43,794)

77,250 (35,040)

ANNUAL
DEPARTURES
1,200
3,000
6,000
15,000
25,000

NOTE: 20-YEAR PAVEMENT LIFE

FLEXURAL STRESS (KG/SQ CM)

INCHES

CENTIMETERS

PAVEMENT THICKNESS
7.10 ACN/PCN Reporting System: Flexible and Rigid Pavements

To determine the ACN of an aircraft on flexible or rigid pavement, both the aircraft gross weight and the subgrade strength category must be known. In the chart in Section 7.10.1, for an aircraft with gross weight of 80,000 lb and low subgrade strength, the flexible pavement ACN is 19.5. In Section 7.10.20, for the same gross weight and subgrade strength, the rigid pavement ACN is 20.6.

Note: An aircraft with an ACN equal to or less that the reported PCN can operate on that pavement subject to any limitations on the tire pressure.

The following table provides ACN data in tabular format similar to the one used by ICAO in the “Aerodrome Design Manual Part 3, Pavements”. If the ACN for an intermediate weight between maximum taxi weight and the empty weight of the aircraft is required, Figures 7.10.1 through 7.10.38 should be consulted.

<table>
<thead>
<tr>
<th>AIRCRAFT MODEL</th>
<th>ALL-UP MASS/ OPERATING MASS EMPTY LB (KG)</th>
<th>LOAD ON ONE MAIN GEAR LEG (%)</th>
<th>TIRE PRESSURE PSI (MPa)</th>
<th>ACN FOR RIGID PAVEMENT SUBGRADES – MN/m³</th>
<th>ACN FOR FLEXIBLE PAVEMENT SUBGRADES – CBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>111,000 (50,349) 62,000 (28,123)</td>
<td>45.95</td>
<td>157 (1.08)</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td>737-200</td>
<td>128,600 (58,332) 65,300 (29,620)</td>
<td>45.96</td>
<td>182 (1.25)</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>737-300</td>
<td>140,000 (63,503) 72,540 (32,904)</td>
<td>45.43</td>
<td>201 (1.38)</td>
<td>38</td>
<td>17</td>
</tr>
<tr>
<td>737-400</td>
<td>150,500 (68,266) 74,170 (33,643)</td>
<td>45.61</td>
<td>185 (1.27)</td>
<td>42</td>
<td>18</td>
</tr>
<tr>
<td>737-500</td>
<td>134,000 (60,781) 69,030 (31,311)</td>
<td>46.12</td>
<td>194 (1.33)</td>
<td>37</td>
<td>17</td>
</tr>
<tr>
<td>737-600</td>
<td>145,000 (65,771) 80,200 (36,378)</td>
<td>45.83</td>
<td>182 (1.25)</td>
<td>37</td>
<td>19</td>
</tr>
<tr>
<td>737-700</td>
<td>155,000 (70,307) 83,000 (37,648)</td>
<td>45.85</td>
<td>197 (1.36)</td>
<td>41</td>
<td>19</td>
</tr>
<tr>
<td>737-700</td>
<td>155,000 (70,307) 83,000 (37,648)</td>
<td>45.85</td>
<td>179 (1.23)</td>
<td>40</td>
<td>19</td>
</tr>
<tr>
<td>737 BBJ</td>
<td>171,500 (77,790) 100,000 (45,360)</td>
<td>45.86</td>
<td>204 (1.41)</td>
<td>47</td>
<td>21</td>
</tr>
<tr>
<td>737-800</td>
<td>174,700 (79,242) 91,300 (41,413)</td>
<td>46.79</td>
<td>204 (1.41)</td>
<td>49</td>
<td>23</td>
</tr>
<tr>
<td>737 BBJ2</td>
<td>174,700 (79,242) 91,300 (41,413)</td>
<td>46.79</td>
<td>204 (1.41)</td>
<td>49</td>
<td>23</td>
</tr>
<tr>
<td>737-900</td>
<td>174,700 (79,242) 94,580 (42,901)</td>
<td>46.79</td>
<td>204 (1.41)</td>
<td>49</td>
<td>23</td>
</tr>
<tr>
<td>737-900ER</td>
<td>188,200(85,366) 98,490(44,676)</td>
<td>47.29</td>
<td>220 (1.52)</td>
<td>56</td>
<td>26</td>
</tr>
</tbody>
</table>

NOTE: VALUES FOR 737-700, -800, -900, -900ER ARE VALID FOR MODELS WITH AND WITHOUT WINGLETS.
7.10.1 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-100, -200 TO 104,000 LB (47,170 KG) MTW

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN
   AMENDMENT 35 TO ICAO ANNEX 14.
   AERODROMES', 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING,
   PERCENT WEIGHT ON MAIN LANDING GEAR, 92.6
3. 55 40 40
   1,000 LB 90 50
   1,000 KG 90 50
   70 35
   60 30
   50 25
   40 20
   30 15
   20 10
   10 5
   0 5

NOTES:
TIRE PRESSURE RANGE FROM 138 TO 145 PSI (9.7 TO 10.27 KG/SQ CM)

CODE D = GB 3 (ULTRA LOW)
CODE C = GB 6 (LOW)
CODE B = GB 10 (MEDIUM)
CODE A = GB 15 (HIGH)
7.10.2 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

NOTES:

* TIRES - H40 x 14-16, 24PR, C40 x 14-21, 24PR
* PRESSURE RANGE FROM 156 TO 168 PSI (10.79 TO 11.81 KG/SQ CM)

- CODE D = CBR 3 (ULTRA LOW)
- CODE C = CBR 6 (LOW)
- CODE B = CBR 10 (MEDIUM)
- CODE A = CBR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14, "AERODROMES", 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.A.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.9
7.10.3 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-100, -200, ADV 737-200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW
(LOW PRESSURE TIRES)
NOTES:
* TIRES - 40 x 14-16 24PR; C40 x 14-21 24PR OR 26PR; H40 x 14.5-19 24PR
* PRESSURE RANGE FROM 170 TO 181 PSI (11.95 TO 12.80 KG/SQ CM)

7.10.4 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL ADV 737-200 AT 120,000 TO 128,600 LB (54,300 TO 58,330 KG) MTW

ACG CLASSIFICATION NUMBER (ACN)

CODE D - CBR 3 (ULTRA LOW)
CODE C - CBR 6 (LOW)
CODE B - CBR 10 (MEDIUM)
CODE A - CBR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14, "AEROPAGES", 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.9
NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 90.85

CODE D = CBR 3 (ULTRA LOW)
CODE C = CBR 6 (LOW)
CODE B = CBR 10 (MEDIUM)
CODE A = CBR 15 (HIGH)

TIRES = H40 x 14.5-19 24PR
7.10.6 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-300 (LOW PRESSURE TIRES)
NOTES:
* TIRES = H42 x 16-19 26PR

1. ACM WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 93.8
7.10.8 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-400 (LOW PRESSURE TIRES)
7.10.9 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

MODEL 737-500
7.10.10 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-500 (LOW PRESSURE TIRES)
NOTES:
- TIRES - H43.5 x 16.0 - 21, 24PR OR 26PR
- PRESSURE - 182 PSI (12.80 KG/SQ CM)

7.10.11 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

CODE D = CBR 3 (ULTRA LOW)
CODE C = CBR 6 (LOW)
CODE B = CBR 10 (MEDIUM)
CODE A = CBR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.66
NOTES:
* TIRES = H44.5 x 16.0 - 21, 28PR
* PRESSURE = 168 PSI (11.81 KG/SQ CM)

AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

CODE D = CBR 3 (ULTRA LOW)
CODE C = CBR 6 (LOW)
CODE B = CBR 10 (MEDIUM)
CODE A = CBR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY, 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.66

AIRCRAFT CLASSIFICATION NUMBER (ACN)

80 90 100 110 120 130 140 150 160
1,000 LB

55 60 65 70
(1,000 KG)

AIRCRAFT GROSS WEIGHT
7.10.13  AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-700 WITH AND WITHOUT WINGLETS
7.10.14  
MODEL 737-700 (OPTIONAL TIRES) WITH AND WITHOUT WINGLETS

NOTES:
* TIRES - H44.5 x 16.5 - 21 28PR
* PRESSURE - 179 PSI (12.59 KG/SQ CM)

CODE D - CBR 3 (ULTRA LOW)
CODE C - CBR 6 (LOW)
CODE B - CBR 10 (MEDIUM)
CODE A - CBR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN ICAD ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.7
7.10.15 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

MODEL 737 BBJ

NOTES:

- TIRES - H44.5 x 16.5 - 21, 28PR
- PRESSURE - 204 PSI (14.34 KG/SQ CM)

CODE D - CBR 3 (ULTRA LOW)
CODE C - CBR 6 (LOW)
CODE B - CBR 10 (MEDIUM)
CODE A - CBR 15 (HIGH)

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAG ANNEX 14 "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.72
7.10.16 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-800 WITH AND WITHOUT WINGLETS

NOTES:

* TIRES - H44.5 x 16.5 - 21, 28PR
* PRESSURE - 204 PSI (14.34 KG/SQ CM)

CODE D - CBR 3 (ULTRA LOW)
CODE C - CBR 6 (LOW)
CODE B - CBR 10 (MEDIUM)
CODE A - CBR 15 (HIGH)

NOTES:

1. ACN WAS DETERMINED AS REFERENCED IN
   ICAO ANNEX 14, "AERODROMES",
   3RD EDITION, JULY 1999.
2. TO DETERMINE MAIN LANDING GEAR LOADING,
   SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 93.58

AIRCRAFT CLASSIFICATION NUMBER (ACN)

AIRCRAFT GROSS WEIGHT

(1,000 KG)

100 110 120 130 140 150 160 170 180

100 110 120 130 140 150 160 170 180

45 50 55 60 65 70 75 80

(1,000 LB)
7.10.17 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737 BBJ2
7.10.18 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-900 WITH AND WITHOUT WINGLETS

NOTES:
* TIRES - H44.5 x 16.5 - 21, 28PR
* PRESSURE - 204 PSI (14.34 KG/SQ CM)

CODE D - CBR 3 (ULTRA LOW)
CODE C - CBR 6 (LOW)
CODE B - CBR 10 (MEDIUM)
CODE A - CBR 15 (HIGH)

2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 93.58
7.10.19  AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

CODE D = CBR 3 (ULTRA LOW)
CODE C = CBR 6 (LOW)
CODE B = CBR 10 (MEDIUM)
CODE A = CBR 15 (HIGH)

NOTES:
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 94.58

TIRES - H44.5 x 16.5 - 21, 30PR
PRESSURE - 220 PSI (15.47 KG/SQ CM)
7.10.20 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

NOTES:

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14, "AERODROMES", 7TH EDITION, JUNE 1978.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.6

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)
7.10.21 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-100, -200, ADV 737-200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW
7.10.22 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-100, -200, ADV 737-200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW
(LOW PRESSURE TIRES)
7.10.23   AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL ADV 737-200 AT 120,000 TO 128,600 LB (54,300 TO 58,330 KG) MTW

NOTES:
* TIRES = 40 x 14–16 24PR; C40 x 14–21 24PR OR 26PR; H40 x 14.5–19 24PR
* PRESSURE RANGE FROM 170 TO 181 PSI (11.95 TO 12.80 KG/SQ CM)

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14, "AERODROMES", 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.9
NOTES:

* TIRES - H42 x 16-19 24PR

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 90.85
7.10.26 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-400
7.10.27 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-400 (LOW PRESSURE TIRES)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.86.

CODE A = k = 350 (HIGH)
CODE B = k = 350 (MEDIUM)
CODE C = k = 150 (LOW)
CODE D = k = 75 (ULTRA LOW)

NOTES:
- Tires = H42 x 16-19 24PR

AIRCRAFT GROSS WEIGHT
1,000 LB
110
100
90
80
70
60
55
50
45
40
35
0
0 10 20 30 40 50
AIRCRAFT CLASSIFICATION NUMBER (ACN)

520 OCTOBER 2005
NOTES:

* TIRES - H40 x 14.5-19 24PR

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.2
7.10.30 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-600

NOTES:
- TIRES = H43.5 x 16.0 - 21, 24PR OR 28PR
- PRESSURE = 182 PSI (12.80 KG/SQ CM)

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.66

AIRCRAFT CLASSIFICATION NUMBER (ACN) vs. AIRCRAFT GROSS WEIGHT (1,000 LB)

GROSS WEIGHT (1,000 KG)
7.10.31 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-600 (OPTIONAL TIRES)
NOTES:
- TIRES = H43.5 x 16.0 - 21, 26PR
- PRESSURE = 197 PSI (13.85 KG/SQ CM)

CODE D - \( k = 75 \) (ULTRA LOW)
CODE C - \( k = 150 \) (LOW)
CODE B - \( k = 300 \) (MEDIUM)
CODE A - \( k = 550 \) (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.7
7.10.33 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-700 (OPTIONAL TIRES) WITH AND WITHOUT WINGLETS
7.10.34 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737 BBJ

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14 "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.72
NOTES:
* TIRES = H 44.5 x 16.5 - 21, 28PR
* PRESSURE = 204 PSI (14.34 KG/SQ CM)

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN
   ICAO ANNEX 14, "AERODROMES", 3RD
   EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING,
   SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 93.58
7.10.36  AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737 BBJ2

NOTES:
- TIRES = H44.5 x 16.5 - 21, 28PR
- PRESSURE = 204 PSI (14.34 KG/SQ CM)

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14 "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 93.58
NOTES:
- TIRES - H44.5 x 16.5 - 21, 28PR
- PRESSURE - 204 PSI (14.34 KG/SQ CN)

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 93.58
7.10.38 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-900ER WITH AND WITHOUT WINGLETS
7.11.1 TIRE INFILATION CHART
MODEL 737-100

NOTES:
* STANDARD PRESSURE TIRES
* CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
* TIRE PRESSURE MAY BE VARIED WITHIN LIMITS SHOWN

- MAXIMUM WEIGHT FOR 24PR
- 24 x 7.7-10 18PR NOSE GEAR
- 24 x 7.7-10 14PR NOSE GEAR
- 40 x 14-16 22PR, 24PR MAIN GEAR

1,000 POUNDS
70 80 90 100 110 120 130 140

1,000 KILOGRAMS
35 40 45 50 55 60

PSI
6 7 8 9 10 11 12 13 14 15 16 18

KG/PSI
7.11.2 TIRE INFLATION CHART
MODEL 737-100, -200

NOTES:
* STANDARD PRESSURE TIRES
* CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
* TIRE PRESSURE MAY BE VARIED WITHIN LIMITS SHOWN

![Tire Inflation Chart](image-url)
7.11.3 TIRE INFLATION CHART
MODEL ADV 737-200
7.11.4 TIRE INFLATION CHART
MODEL 737–200 (LOW PRESSURE TIRES)

NOTES:
- STANDARD PRESSURE TIRES
- CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
- TIRE PRESSURE MAY BE VARIED WITHIN LIMITS SHOWN

C40 x 18–17 20PR
MAIN GEAR

C24 x 8.5–12 12PR
NOSE GEAR

MAXIMUM WEIGHT FOR 20 PR

1,000 POUNDS
1,000 KILOGRAMS
AIRPLANE GROSS WEIGHT
7.11.5 TIRE INFLATION CHART
MODEL 737-300

MAIN GEAR TIRE
H40 x 14.5 - 19 24PR

MAIN GEAR TIRE
H42 x 16 - 19 24PR
(LOW PRESSURE TIRES)

NOSE GEAR TIRE
27 x 7.75 - 15 10PR

NOTES:
* LOADED PRESSURES
* CURVES TERMINATE AT MAXIMUM GROSS
  WEIGHT RECOMMENDED FOR THE TIRE
* TIRE PRESSURES MAY BE VARIED WITHIN
  LIMITS SHOWN

TIRE INFLATION PRESSURE
KG/SQ CM

PSI

1,000 POUNDS

1,000 KILOGRAMS
AIRPLANE GROSS WEIGHT
7.11.6 TIRE INFLATION CHART
MODEL 737-400

NOTES:
• LOADED PRESSURES
• CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
• TIRE PRESSURES MAY BE VARIED WITHIN LIMITS SHOWN
7.11.7 TIRE INFLATION CHART
MODEL 737-500

NOTES:
* LOADED PRESSURES
* CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
* TIRE PRESSURES MAY BE VARIED WITHIN LIMITS SHOWN
8.0 FUTURE 737 DERIVATIVE AIRPLANES
8.0 FUTURE 737 DERIVATIVE AIRPLANES

Development of these derivatives will depend on airline requirements. The impact of airline requirements on airport facilities will be a consideration in the configuration and design of these derivatives.
9.0 SCALED 737 DRAWINGS

9.1 - 9.5  Scaled Drawings, 737-100
9.6 - 9.10  Scaled Drawings, 737-200
9.11 – 9.15 Scaled Drawings, 737-300
9.16 – 9.20 Scaled Drawings, 737-300 With Winglets
9.21 – 9.25 Scaled Drawings, 737-400
9.26 – 9.30 Scaled Drawings, 737-500
9.31 - 9.35 Scaled Drawings, 737-600
9.36 - 9.40 Scaled Drawings, 737-600 With Winglets
9.41 – 9.45 Scaled Drawings, 737-700
9.46 - 9.50 Scaled Drawings, 737-700 With Winglets, 737 BBJ
9.51 - 9.55 Scaled Drawings, 737-800
9.56 - 9.60 Scaled Drawings, 737-800 With Winglets, 737 BBJ2
9.61 – 9.65 Scaled Drawings, 737-900, -900ER
9.66 – 9.70 Scaled Drawings, 737-900, -900ER With Winglets
9.0 SCALED DRAWINGS

The drawings in the following pages show airplane plan view drawings, drawn to approximate scale as noted. The drawings may not come out to exact scale when printed or copied from this document. Printing scale should be adjusted when attempting to reproduce these drawings. Three-view drawing files of the 737 airplane models, along with other Boeing airplane models, can be downloaded from the following website:

http://www.boeing.com/airports
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.1.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-100

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
9.1.2 SCALED DRAWING - 1 IN = 32 FT

MODEL 737-100

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H₂O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-100
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4.1 SCALED DRAWING – 1:500
MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4.2 SCALED DRAWING – 1:500
MODEL 737-100
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O  POTABLE WATER
L  LAVATORY SERVICE
M  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-200

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-200

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7.2 SCALED DRAWING - 1 IN = 50 FT

MODEL 737-200
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H  POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.8.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.9.1 SCALED DRAWING – 1:500
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.9.2 SCALED DRAWING – 1:500
MODEL 737-200
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.10.1 SCALED DRAWING – 1:1000
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.10.2 SCALED DRAWING – 1:1000
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.11.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-300

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.11.2 SCALED DRAWING - 1 IN = 32 FT

MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12.1 SCALED DRAWING - 1 IN = 50 FT

MODEL 737-300

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-300
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

NOTE:  WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.2 SCALED DRAWING - 1 IN = 100 FT

MODEL 737-300

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.14.1 SCALED DRAWING – 1:500
MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.14.2 SCALED DRAWING – 1:500
MODEL 737-300

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NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.15.1 SCALED DRAWING – 1:1000
MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.16.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.16.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.17.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-300 WITH WINGLETS

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

LEGEND
A    AIR CONDITIONING
C    CARGO DOOR
E    ELECTRICAL
F    FUEL
G    SERVICE DOOR
H    HYDRAULIC
H2O  POTABLE WATER
L    LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG   NOSE LANDING GEAR
P    PNEUMATIC (AIR START)
V    FUEL VENT
X    PASSENGER DOOR
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.17.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.18.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.18.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.19.1 SCALED DRAWING – 1:500
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.19.2  SCALED DRAWING – 1:500
MODEL 737-300 WITH WINGLETS
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H₂O  POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.20.1 SCALED DRAWING – 1:1000
MODEL 737-300 WITH WINGLETS
9.20.2 SCALED DRAWING – 1:1000
MODEL 737-300 WITH WINGLETS
9.21.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-400

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.21.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.22.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-400

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.22.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-400
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H  HYDRAULIC
H2O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.23.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-400

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.23.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.24.1 SCALED DRAWING – 1:500
MODEL 737-100

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.24.2 SCALED DRAWING – 1:500
MODEL 737-100
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
       SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.25.1 SCALED DRAWING – 1:1000
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.25.2 SCALED DRAWING – 1:1000
MODEL 737-400
NOTE:  WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.26.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-500

NOTE:  FOR TURNING RADIUS DATA SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.26.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.27.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.27.2  SCALED DRAWING - 1 IN  = 50 FT
MODEL 737-500
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H  HYDRAULIC
H2O  POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.28.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.28.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.29.2 SCALED DRAWING – 1:500
MODEL 737-500
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O  POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.30.1  SCALED DRAWING – 1:1000
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.30.2 SCALED DRAWING – 1:1000
MODEL 737-500

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Legend:
A  Air Conditioning
C  Cargo Door
E  Electrical
F  Fuel
G  Service Door
H2O  Potable Water
MLG  Main Landing Gear
NG  Nose Landing Gear
P  Pneumatic (Air Start)
L  Vacuum Lavatory Service
V  Fuel Vent
X  Passenger Door

Note: For turning radius data
See sections 4.2 and 4.3

9.31.1 Scaled Drawing - 1 IN = 32 FT
MODEL 737-600

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.31.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.32.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-600

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.32.2  SCALED DRAWING - 1 IN = 50 FT
MODEL 737-600

D6-58325-6

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NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H\textsubscript{2}O  POTABLE WATER
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE:  FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE:  WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.33.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.33.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.34.1 SCALED DRAWING - 1:500
MODEL 737-600

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H₂O POTABLE WATER
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.34.2 SCALED DRAWING - 1:500
MODEL 737-600

D6-58325-6
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR
NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.35.1 SCALED DRAWING - 1:1000
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.35.2 SCALED DRAWING - 1:1000

MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.36.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.36.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.37.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.37.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-600 WITH WINGLETS

D6-58325-6
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.38.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.38.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.39.1 SCALED DRAWING - 1:500
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.39.2 SCALED DRAWING - 1:500
MODEL 737-600 WITH WINGLETS
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.40.1 SCALED DRAWING - 1:1000
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.40.2 SCALED DRAWING - 1:1000
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.41.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700
9.41.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.42.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.42.2 SCALED DRAWING - 1 IN  = 50 FT
MODEL 737-700
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR
NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.43.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700

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OCTOBER 2005  627
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.43.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.44.1 SCALED DRAWING - 1:500
MODEL 737-700

NOTE: FOR TURNING RADIUS DATA SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.44.2 SCALED DRAWING - 1:500
MODEL 737-700
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.45.1 SCALED DRAWING - 1:1000
MODEL 737-700

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OCTOBER 2005  631
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.45.2  SCALED DRAWING - 1:1000
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.46.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.46.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.47.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.47.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.48.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.48.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.49.2 SCALED DRAWING - 1:500
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 52 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.50.1 SCALED DRAWING - 1:1000
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.50.2  SCALED DRAWING - 1:1000
MODEL 737-700 WITH WINGLETS, 737 BBJ

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.51.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.51.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.52.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-800

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.52.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-800
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
      SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.53.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-800

OCTOBER 2005  647
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.54.1 SCALED DRAWING - 1:500
MODEL 737-800

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.55.1 SCALED DRAWING - 1:1000
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.55.2 SCALED DRAWING – 1:1000
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.56.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.56.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.57.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2
MODEL 737-800 WITH WINGLETS, 737 BBJ2

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O  POTABLE WATER
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.58.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2

D6-58325-6
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.59.1 SCALED DRAWING - 1:500
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.59.2 SCALED DRAWING - 1:500
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O  POTABLE WATER
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.60.1 SCALED DRAWING - 1:1000
MODEL 737-800 WITH WINGLETS, 737 BBJ2

D6-58325-6
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.60.2 SCALED DRAWING – 1:1000
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.61.2 SCALED DRAWING - 1 IN  = 32 FT
MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.62.1 SCALED DRAWING - 1 IN = 50 FT

MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.62.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-900, -900ER
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.63.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.63.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.64.1 SCALED DRAWING - 1:500
MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.64.2 SCALED DRAWING - 1:500

MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.65.1 SCALED DRAWING - 1:1000
MODEL 737-900, -900ER

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.65.2 SCALED DRAWING – 1:1000
MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.66.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-900, -900ER WITH WINGLETS

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.66.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H₂O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

9.67.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-900, -900ER WITH WINGLETS

D6-58325-6

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.67.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.68.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.68.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.69.1 SCALED DRAWING - 1:500
MODEL 737-900, -900ER WITH WINGLETS

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.69.2 SCALED DRAWING - 1:500
MODEL 737-900, -900ER WITH WINGLETS
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.70.1 SCALED DRAWING - 1:1000
MODEL 737-900, -900ER WITH WINGLETS

D6-58325-6

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.70.2 SCALED DRAWING – 1:1000
MODEL 737-900, -900ER WITH WINGLETS

D6-58325-6
682 OCTOBER 2005