737 Airplane Characteristics for Airport Planning

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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 20-93

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 than 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

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.
### 2.1.1 General Characteristics: Model 737-100

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**NOTE:**
1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
### 2.1.2 General Characteristics: Model 737-200

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<td>MAX DESIGN - TAKEOFF WEIGHT</td>
<td>POUNDS</td>
<td>100,000 103,000 109,000 110,000 115,500</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>45,359 46,720 49,442 49,895 52,390</td>
</tr>
<tr>
<td>MAX DESIGN - LANDING WEIGHT</td>
<td>POUNDS</td>
<td>95,000 95,000 98,000 99,000 103,000</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>43,091 43,091 44,452 44,906 46,720</td>
</tr>
<tr>
<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>85,000 85,000 88,000 92,000 95,000</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>38,555 38,555 39,916 41,731 43,091</td>
</tr>
<tr>
<td>OPERATING - EMPTY WEIGHT (1)</td>
<td>POUNDS</td>
<td>59,900 60,900 60,800 61,800 59,800</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>27,170 27,624 27,578 28,032 27,125</td>
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<tr>
<td>MAX STRUCTURAL - PAYLOAD (1)</td>
<td>POUNDS</td>
<td>25,100 24,100 27,200 30,200 35,200</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>11,385 10,932 12,338 13,698 15,966</td>
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<td>SEATING CAPACITY (1)</td>
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<td>97: 24 FIRST CLASS AND 73 ECONOMY</td>
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<tr>
<td></td>
<td>ALL-ECONOMY</td>
<td>90 AT FIVE ABREAST, OR 124 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>875 875 875 875 875</td>
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<tr>
<td></td>
<td>CUBIC METERS</td>
<td>24.8 24.8 24.8 24.8 24.8</td>
</tr>
<tr>
<td>USABLE FUEL</td>
<td>U.S. GALLONS</td>
<td>3,460 4,190 4,230 4,780 4,780</td>
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<tr>
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<td>LITERS</td>
<td>13,096 15,859 16,011 18,092 18,092</td>
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<tr>
<td></td>
<td>POUNDS</td>
<td>23,182 28,073 28,341 32,026 32,026</td>
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<td></td>
<td>KILOGRAMS</td>
<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.
## 2.1.3 General Characteristics: Model 737-200, Convertible and Executive Airplanes

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-200</th>
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<tbody>
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<td></td>
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<td>CONVERTIBLE</td>
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<td>POUNDS</td>
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<td>KILOGRAMS</td>
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<td>KILOGRAMS</td>
<td>49,442</td>
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<td>98,000</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>44,452</td>
</tr>
<tr>
<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>88,000</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>39,916</td>
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<td>POUNDS</td>
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<td>KILOGRAMS</td>
<td>27,714</td>
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<td>MAX STRUCTURAL - PAYLOAD</td>
<td>POUNDS</td>
<td>26,900</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>12,202</td>
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<td>SEATING CAPACITY (1)</td>
<td>TWO-CLASS</td>
<td>110: 8 FIRST CLASS AND 102 ECONOMY (2)</td>
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<tr>
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<td>ALL-ECONOMY</td>
<td>117 AT SIX ABREAST (2) ; FAA EXIT LIMIT: 136</td>
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<td>MAX CARGO VOLUME - MAIN DECK</td>
<td>CUBIC FEET</td>
<td>2,760 (3)</td>
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<td>CUBIC METERS</td>
<td>78.2 (3)</td>
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<td>MAX CARGO VOLUME - LOWER DECK</td>
<td>CUBIC FEET</td>
<td>875</td>
</tr>
<tr>
<td></td>
<td>CUBIC METERS</td>
<td>24.8</td>
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<td>USABLE FUEL</td>
<td>U.S. GALLONS</td>
<td>4,200</td>
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<td>LITERS</td>
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<td></td>
<td>POUNDS</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>12,764</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 IN ALL-PASSENGER CONFIGURATION
3. AIRPLANE IN ALL-CARGO CONFIGURATION WITH THE "QC" CARGO SYSTEM 88 x 125 IN (2.24 x 3.18 M) PALLETS
### 2.1.4 General Characteristics: Model 737-200

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<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-200</th>
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<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 53,297 54,431 56,699 58,332</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 53,070 54,204 56,472 58,105</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 47,627 47,627 48,534 48,534</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>43,091 43,091 43,091 43,091 43,091</td>
</tr>
<tr>
<td>OPERATING EMPTY WEIGHT</td>
<td>POUNDS</td>
<td>62,600 64,500 63,100 63,900 65,300</td>
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<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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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>14,696 13,835 14,470 14,107 13,472</td>
</tr>
<tr>
<td>SEATING CAPACITY (1)</td>
<td></td>
<td>102: 14 FIRST CLASS AND 88 ECONOMY ALL-ECONOMY 93 AT FIVE ABREAST, OR 130 AT SIX ABREAST; FAA EXIT LIMIT: 136</td>
</tr>
<tr>
<td>MAX CARGO VOLUME LOWER DECK</td>
<td>CUBIC FEET</td>
<td>875 875 875 745 (2) 640 (3)</td>
</tr>
<tr>
<td></td>
<td>CUBIC METERS</td>
<td>24.8 24.8 24.8 21.1 (2) 18.1 (3)</td>
</tr>
<tr>
<td>USABLE FUEL</td>
<td>U.S. GALLONS</td>
<td>5,160 5,160 5,160 5,550 (2) 5,970 (3)</td>
</tr>
<tr>
<td></td>
<td>LITERS</td>
<td>19,531 19,531 19,531 21,007 (2) 22,596 (3)</td>
</tr>
<tr>
<td></td>
<td>POUNDS</td>
<td>34,572 34,572 34,572 37,185 (2) 39,999 (3)</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>15,682 15,682 15,682 16,867 (2) 18,143 (3)</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
## 2.1.5 General Characteristics: Model Advanced 737-200C, -200QC

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<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-200C, -200QC</th>
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</thead>
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<tr>
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<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  53,297  54,431  56,699  58,332</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  53,070  54,204  56,472  58,105</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  47,627  47,627  48,534  48,534</td>
</tr>
<tr>
<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>95,000  96,500  95,000  99,000  99,000</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>43,091  43,772  43,091  44,906  44,906</td>
</tr>
<tr>
<td>OPERATING - EMPTY WEIGHT (1)</td>
<td>POUNDS</td>
<td>65,700  69,800  66,500  67,000  65,700</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>29,801  31,661  30,164  30,391  29,801</td>
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<tr>
<td>MAX STRUCTURAL - PAYLOAD</td>
<td>POUNDS</td>
<td>29,300  26,700  28,500  32,000  33,300</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>13,290  12,111  12,927  14,515  15,105</td>
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<tr>
<td>SEATING CAPACITY (2)</td>
<td>TWO-CLASS</td>
<td>102: 14 FIRST CLASS AND 88 ECONOMY</td>
</tr>
<tr>
<td></td>
<td>ALL-ECONOMY</td>
<td>93 AT FIVE ABREAST, OR 130 AT SIX ABREAST; FAA EXIT LIMIT: 136</td>
</tr>
<tr>
<td>MAX CARGO VOLUME - MAIN DECK (3)</td>
<td>CUBIC FEET</td>
<td>2,760  2,760  2,760  2,760  2,760</td>
</tr>
<tr>
<td></td>
<td>CUBIC METERS</td>
<td>78.2  78.2  78.2  78.2  78.2</td>
</tr>
<tr>
<td>MAX CARGO VOLUME - LOWER DECK</td>
<td>CUBIC FEET</td>
<td>875  875  875  875  875</td>
</tr>
<tr>
<td></td>
<td>CUBIC METERS</td>
<td>24.8  24.8  24.8  24.8  24.8</td>
</tr>
<tr>
<td></td>
<td>LITERS</td>
<td>19,531  19,531  19,531  19,531  19,531</td>
</tr>
<tr>
<td></td>
<td>POUNDS</td>
<td>34,572  34,572  34,572  34,572  34,572</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>15,682  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
### 2.1.6 General Characteristics: Model 737-300

<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>
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</thead>
<tbody>
<tr>
<td>MAX DESIGN - TAXI WEIGHT</td>
<td>POUNDS</td>
<td>125,000</td>
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<td>KILOGRAMS</td>
<td>56,699</td>
<td>59,194</td>
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<td>MAX DESIGN - TAKEOFF WEIGHT</td>
<td>POUNDS</td>
<td>124,500</td>
<td>130,000</td>
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<tr>
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<td>KILOGRAMS</td>
<td>56,472</td>
<td>58,967</td>
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<td>MAX DESIGN - LANDING WEIGHT</td>
<td>POUNDS</td>
<td>114,000</td>
<td>114,000</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>51,710</td>
<td>51,710</td>
</tr>
<tr>
<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>105,000</td>
<td>105,000</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>47,627</td>
<td>47,627</td>
</tr>
<tr>
<td>OPERATING - EMPTY WEIGHT (1)</td>
<td>POUNDS</td>
<td>69,400</td>
<td>71,870</td>
</tr>
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<td>KILOGRAMS</td>
<td>31,479</td>
<td>32,600</td>
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<tr>
<td>MAX STRUCTURAL - PAYLOAD</td>
<td>POUNDS</td>
<td>35,600</td>
<td>33,130</td>
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<td>KILOGRAMS</td>
<td>16,148</td>
<td>15,028</td>
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<td>SEATING CAPACITY</td>
<td>TWO-CLASS</td>
<td>128: 8 FIRST CLASS AND 120 ECONOMY</td>
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<td></td>
<td>ALL-ECONOMY</td>
<td>134 AT SIX ABREAST; FAA EXIT LIMIT: 149</td>
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<td>MAX CARGO VOLUME - LOWER DECK</td>
<td>CUBIC FEET</td>
<td>1,068</td>
<td>929 (2)</td>
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<td></td>
<td>CUBIC METERS</td>
<td>30.2</td>
<td>26.3 (2)</td>
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<td>USABLE FUEL</td>
<td>U.S. GALLONS</td>
<td>5,311</td>
<td>5,701 (2)</td>
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<td>LITERS</td>
<td>20,102</td>
<td>21,578 (2)</td>
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<td>POUNDS</td>
<td>35,584</td>
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<td>KILOGRAMS</td>
<td>16,141</td>
<td>17,326 (2)</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
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

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<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>CFM56-3B2 ENGINES (22,000 LB SLST)</th>
<th>CFM56-3C ENGINES (23,500 LB SLST)</th>
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<tr>
<td>- TAXI WEIGHT</td>
<td>POUNDS</td>
<td>139,000</td>
<td>143,000</td>
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<td>KILOGRAMS</td>
<td>63,049</td>
<td>64,864</td>
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<td>- TAKEOFF WEIGHT</td>
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<td>64,637</td>
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<td>- LANDING WEIGHT</td>
<td>POUNDS</td>
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<td>124,000</td>
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<td>KILOGRAMS</td>
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<td>56,245</td>
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<td></td>
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<tr>
<td>- ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>113,000</td>
<td>117,000</td>
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<td>KILOGRAMS</td>
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<td>53,070</td>
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<td>- EMPTY WEIGHT (1)</td>
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<td>73,170</td>
<td>74,170</td>
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<td>KILOGRAMS</td>
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<td>33,643</td>
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<td><strong>MAX STRUCTURAL</strong></td>
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<td></td>
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<tr>
<td>- PAYLOAD</td>
<td>POUNDS</td>
<td>39,830</td>
<td>42,830</td>
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<td>KILOGRAMS</td>
<td>18,067</td>
<td>19,427</td>
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<tr>
<td><strong>SEATING CAPACITY</strong></td>
<td>TWO-CLASS</td>
<td>146: 8 FIRST CLASS AND 138 ECONOMY</td>
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<td>ALL-ECONOMY</td>
<td>159 AT SIX ABREAST; FAA EXIT LIMIT: 189</td>
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<td><strong>MAX CARGO VOLUME</strong></td>
<td>LOWER DECK</td>
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<td>CUBIC FEET</td>
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<td>1,222 (4)</td>
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<td>CUBIC METERS</td>
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<td>34.6 (4)</td>
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<td></td>
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<tr>
<td></td>
<td>U.S. GALLONS</td>
<td>5,311</td>
<td>5,803 (4)</td>
</tr>
<tr>
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<td>LITERS</td>
<td>20,102</td>
<td>21,964 (4)</td>
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<td>POUNDS</td>
<td>35,584</td>
<td>38,880 (4)</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>16,141</td>
<td>17,636 (4)</td>
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</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
### 2.1.8 General Characteristics: Model 737-500

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<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-500</th>
<th>CFM56-3B1 ENGINES (18,500 LB SLST)</th>
<th>CFM56-3B1 ENGINES (20,000 LB SLST)</th>
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<td>133,500</td>
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<td>46,493</td>
<td>46,493</td>
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<td>SEATING CAPACITY</td>
<td>TWO-CLASS</td>
<td>108: 8 FIRST CLASS AND 100 ECONOMY</td>
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<td>122 AT SIX ABREAST; FAA EXIT LIMIT: 149</td>
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<td>822</td>
<td>683 (2)</td>
<td>595 (3)</td>
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<td>CUBIC METERS</td>
<td>23.3</td>
<td>19.3 (2)</td>
<td>16.8 (3)</td>
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<td>U.S. GALLONS</td>
<td>5,311</td>
<td>5,701 (2)</td>
<td>6,121 (3)</td>
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<td>POUNDS</td>
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<td>17,326 (2)</td>
<td>18,602 (3)</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
## 2.1.9 General Characteristics: Model 737-600

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<td>MAX DESIGN - TAXI WEIGHT</td>
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<td>56,472</td>
</tr>
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<td>MAX DESIGN - TAKEOFF WEIGHT</td>
<td>POUNDS</td>
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<td>56,245</td>
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<td>KILOGRAMS</td>
<td>54,658</td>
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<tr>
<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
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<td>USABLE FUEL</td>
<td>US GALLONS</td>
<td>6875</td>
</tr>
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<td></td>
<td>LITERS</td>
<td>26,022</td>
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<td>46,063</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>20,894</td>
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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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<td>60,328</td>
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<td>MAX DESIGN - LANDING WEIGHT</td>
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<td>KILOGRAMS</td>
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<td>CUBIC METERS</td>
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<td>US GALLONS</td>
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<td></td>
<td>LITERS</td>
<td>26,022</td>
</tr>
<tr>
<td></td>
<td>POUNDS</td>
<td>46,063</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>20,894</td>
</tr>
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**NOTE:**
1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
2.1.11 General Characteristics: Model 737-800, -800 With Winglets

<table>
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<th>CHARACTERISTICS</th>
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<th>MODEL 737-800, -800 WITH WINGETS</th>
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<td>US GALLONS</td>
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<td>LITERS</td>
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<td>KILOGRAMS</td>
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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

<table>
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<td>MAX DESIGN - TAKEOFF WEIGHT</td>
<td>POUNDS</td>
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<td>KILOGRAMS</td>
<td>74,389</td>
</tr>
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<td>MAX DESIGN - LANDING WEIGHT</td>
<td>POUNDS</td>
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</tr>
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<td></td>
<td>KILOGRAMS</td>
<td>66,361</td>
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<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
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<td>KILOGRAMS</td>
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<td>KILOGRAMS</td>
<td>20,894</td>
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**NOTE:**

1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
### 2.1.13 General Characteristics: Model 737-900er, -900er With Winglets

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<th>MODEL 737-900ER, -900ER WITH WINGLETS</th>
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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>KILOGRAMS</td>
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<td>SEE NOTES</td>
<td>(2)</td>
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<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. WITH NO AUXILIARY FUEL TANK
3. WITH ONE AUXILIARY FUEL TANK
4. WITH TWO AUXILIARY FUEL TANKS
2.1.14 General Characteristic Model 737 BBJ

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<th>MODEL 737 BBJ</th>
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<td>KILOGRAMS</td>
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<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
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<td>14,821</td>
<td>14,609</td>
<td>14,520</td>
<td>14,385</td>
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<td>CUBIC FEET</td>
<td>611</td>
<td>515</td>
<td>415</td>
<td>319</td>
<td>268</td>
<td>214</td>
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<tr>
<td></td>
<td>CUBIC METERS</td>
<td>17.3</td>
<td>14.6</td>
<td>11.7</td>
<td>9.0</td>
<td>7.6</td>
<td>6.1</td>
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<tr>
<td>USEABLE FUEL</td>
<td>US GALLONS</td>
<td>8,360</td>
<td>8,897</td>
<td>9,399</td>
<td>9,917</td>
<td>10,213</td>
<td>10,457</td>
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<tr>
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<td>LITERS</td>
<td>31,646</td>
<td>33,611</td>
<td>35,579</td>
<td>37,540</td>
<td>38,660</td>
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<tr>
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<td>Pounds</td>
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<td>59,610</td>
<td>62,973</td>
<td>66,444</td>
<td>68,427</td>
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<td>27,095</td>
<td>28,624</td>
<td>30,202</td>
<td>31,103</td>
<td>31,846</td>
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NOTE:
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

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737 BBJ2</th>
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<tbody>
<tr>
<td>MAX DESIGN - TAXI WEIGHT</td>
<td>POUNDS</td>
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<td>MAX DESIGN - ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
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<td>KILOGRAMS</td>
<td>62,730</td>
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**NUMBER OF AUXILIARY FUEL TANKS**

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<tr>
<th>SPEC OPERATING - EMPTY WEIGHT (1)</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td></td>
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<td>100,312</td>
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<td>39,578</td>
<td>38,907</td>
<td>38,515</td>
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<td>17,563</td>
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<td>1,224</td>
<td>1,116</td>
<td>1,029</td>
<td>922</td>
<td>814</td>
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<td>31.6</td>
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<td>LITERS</td>
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<td>27,992</td>
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<td>31,645</td>
<td>33,609</td>
<td>35,578</td>
<td>37,538</td>
<td>39,530</td>
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<tr>
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<td>POUNDS</td>
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<td>49,546</td>
<td>52,508</td>
<td>56,012</td>
<td>59,489</td>
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<td>26,992</td>
<td>28,572</td>
<td>30,214</td>
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**NOTE:**
1. SPEC WEIGHT FOR NUMBER OF AUXILIARY FUEL TANKS SHOWN. CONSULT WITH AIRCRAFT OPERATOR FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
2.2 GENERAL DIMENSIONS

2.2.1 General Dimensions: Model 737-100
2.2.2 General Dimensions: Model 737-200

- 100 FT 2 IN (30.53 M)
- 63 FT 4 IN (19.30 M)
- 58 FT 8 IN (17.88 M) (APPROX)
- 15 FT 10 IN (4.83 M)
- 12 FT 4 IN (3.76 M)
- 13 FT 2 IN (4.01 M)
- 37 FT 4 IN (11.38 M)
- 96 FT 11 IN (29.54 M)
- 13 FT (3.96 M)
- 36 FT (10.97 M)
- 93 FT (28.35 M)
- 17 FT 2 IN (5.23 M)

SEE SEC2.3

-200C ONLY
2.2.3 General Dimensions: Model 737-300

![Diagram of Model 737-300 with dimensions labeled in feet and meters.](image)
2.2.4 General Dimensions: Model 737-300 With Winglets
2.2.5 General Dimensions: Model 737-400

- 74 FT 8 IN (22.76 m)
- 69 FT 6 IN (21.18 m) (APPROX)
- 41 FT 2 IN (12.55 m)
- 15 FT 10 IN (4.83 m)
- 12 FT 4 IN (3.76 m)
- 13 FT 2 IN (4.01 m)
- 46 FT 10 IN (14.27 m)
- 13 FT 2 IN (4.01 m)
- 115 FT 7 IN (35.23 m)
- 94 FT 9 IN (28.88 m)
- 41 FT 8 IN (12.70 m)
- APPROX 8 FT (2.44 m)
- 17 FT 2 IN (5.23 m)

SEE SEC 2.3
2.2.6  General Dimensions: Model 737-500

[Diagram showing general dimensions of Model 737-500 with measurements in feet and inches and metric units.

- 101 ft 9 in (31.01 m)
- 64 ft 3 in (19.58 m)
- 59 ft 1 in (18.01 m) (APPROX)
- 30 ft 8 in (9.35 m)
- 15 ft 10 in (4.83 m)
- 12 ft 4 in (3.76 m)
- 13 ft 2 in (4.01 m)
- 36 ft 4 in (11.07 m)
- 13 ft 5 in (4.09 m)
- 97 ft 9 in (29.79 m)
- 94 ft 9 in (28.88 m)
- 41 ft 8 in (12.70 m)
- APPROX 8 ft (2.44 m)
- 17 ft 2 in (5.23 m)

Measurement scale: 1 unit = 2 ft (0.6 m) or 1 unit = 5 ft (1.5 m)

METERS 0 2 4 6 10 15 20 25
FEET 0 5 10 15 20 25

September 2020
2.2.7 General Dimensions: Model 737-600

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
<th>Unit</th>
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<tr>
<td>102 ft 6 in</td>
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</tr>
<tr>
<td>29 ft 6 in</td>
<td>8.84 m</td>
<td></td>
</tr>
<tr>
<td>15 ft 10 in</td>
<td>4.83 m</td>
<td></td>
</tr>
<tr>
<td>12 ft 4 in</td>
<td>3.76 m</td>
<td></td>
</tr>
<tr>
<td>97 ft 9 in</td>
<td>29.79 m</td>
<td></td>
</tr>
<tr>
<td>41 ft 3 in</td>
<td>12.57 m</td>
<td></td>
</tr>
<tr>
<td>36 ft 10 in</td>
<td>11.23 m</td>
<td></td>
</tr>
<tr>
<td>13 ft 5 in</td>
<td>4.09 m</td>
<td></td>
</tr>
<tr>
<td>112 ft 7 in</td>
<td>34.32 m</td>
<td></td>
</tr>
<tr>
<td>47 ft 1 in</td>
<td>14.35 m</td>
<td></td>
</tr>
<tr>
<td>Approx 8 ft</td>
<td>2.44 m</td>
<td></td>
</tr>
<tr>
<td>18 ft 9 in</td>
<td>5.72 m</td>
<td></td>
</tr>
</tbody>
</table>
2.2.8 General Dimensions: Model 737-600 With Winglets

![Diagram of Model 737-600 with Winglets showing dimensions in feet and meters.]

- 64 FT 1 IN (19.53 m) (APPROX)
- 71 FT 1 IN (21.67 m)
- 102 FT 6 IN (31.24 m)
- 29 FT 6 IN (8.84 m)
- 15 FT 10 IN (4.83 m)
- 12 FT 4 IN (3.76 m)
- 97 FT 9 IN (29.79 m)
- 41 FT 3 IN (12.57 m)
- 36 FT 10 IN (11.23 m)
- 13 FT 5 IN (4.09 m)
- 117 FT 5 IN (35.79 m)
- 47 FT 1 IN (14.35 m)
- APPROX 8 FT (2.44 m)
- 18 FT 9 IN (5.72 m)
2.2.9 General Dimensions: Model 737-700, -700C
2.2.10 General Dimensions: Model 737-700 With Winglets, 737 BBJ
2.2.11 General Dimensions: Model 737-800
2.2.12 General Dimensions: Model 737-800 With Winglets, 737 BBJ2
2.2.13 General Dimensions: Model 737-900, -900ER
2.2.14 General Dimensions: Model 737-900, -900ER With Winglets

[Diagram showing the dimensions of the Model 737-900, -900ER with Winglets.]
2.3 GROUND CLEARANCES

2.3.1 Ground Clearances: Model 737-100, -200, -200C

### Table of Ground Clearances

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>737-100</th>
<th>737-200, -200C</th>
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<td>MIN (AT MTW)</td>
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<tr>
<td></td>
<td>FT - M</td>
<td>FT - M</td>
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<tr>
<td>A TOP OF FUSELAGE</td>
<td>16 – 9</td>
<td>5.11</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>8 – 8</td>
<td>2.64</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
<td>4 – 3</td>
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</tr>
<tr>
<td>D ENGINE</td>
<td>1 – 11</td>
<td>0.58</td>
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<tr>
<td>E WINGTIP</td>
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<tr>
<td>F AFT CARGO DOOR</td>
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</tr>
<tr>
<td>G ENTRY DOOR NO 2</td>
<td>9 – 0</td>
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</tr>
<tr>
<td>H STABILIZER</td>
<td>16 – 8</td>
<td>5.08</td>
</tr>
<tr>
<td>L BOTTOM OF FUSELAGE</td>
<td>3 – 7</td>
<td>1.09</td>
</tr>
<tr>
<td>M MAIN DECK CARGO DOOR</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</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

<table>
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<tr>
<td>A TOP OF FUSELAGE</td>
<td>17 – 3</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>9 – 1</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
<td>4 – 7</td>
</tr>
<tr>
<td>D ENGINE</td>
<td>1 – 9</td>
</tr>
<tr>
<td>E WINGTIP</td>
<td>10 – 2</td>
</tr>
<tr>
<td>F AFT CARGO DOOR</td>
<td>4 – 6</td>
</tr>
<tr>
<td>G ENTRY DOOR NO 2</td>
<td>8 – 7</td>
</tr>
<tr>
<td>H STABILIZER</td>
<td>16 – 3</td>
</tr>
<tr>
<td>J VERTICAL TAIL</td>
<td>36 – 4</td>
</tr>
<tr>
<td>K OVERWING EXIT DOOR</td>
<td>10 – 6</td>
</tr>
<tr>
<td>L BOTTOM OF FUSELAGE</td>
<td>3 – 10</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.
2.3.3 Ground Clearances: Model 737-600, -700, -700C

<table>
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<tr>
<td></td>
<td>FT - IN</td>
<td>M</td>
</tr>
<tr>
<td>A TOP OF FUSELAGE</td>
<td>18 - 2</td>
<td>5.54</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
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<tr>
<td>D ENGINE</td>
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</tr>
<tr>
<td>H STABILIZER</td>
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<td>5.61</td>
</tr>
<tr>
<td>J VERTICAL TAIL</td>
<td>41 - 8</td>
<td>12.70</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.
### 2.3.4 Ground Clearances: Model 737-800, -900, -900ER

**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.
2.3.5 Ground Clearances: Model 737-700, -800, -900, -900ER With Winglets, BBJ, BBJ2

<table>
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<tr>
<th>DESCRIPTION</th>
<th>737-700 WITH WINGLETS, BBJ</th>
<th>737-800 WITH WINGLETS, BBJ2</th>
<th>737-900 WITH WINGLETS</th>
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<td>MIN (MTW)</td>
<td>MAX (OEW)</td>
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<tr>
<td>A TOP OF FUSELAGE</td>
<td>18 - 3</td>
<td>5.56</td>
<td>17 - 9</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>9 - 0</td>
<td>2.74</td>
<td>8 - 6</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
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<tr>
<td>D ENGINE</td>
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<td>1 - 6</td>
</tr>
<tr>
<td>E WINGTIP</td>
<td>21 - 9</td>
<td>6.63</td>
<td>21 - 3</td>
</tr>
<tr>
<td>F AFT CARGO DOOR</td>
<td>5 - 10</td>
<td>1.78</td>
<td>5 - 4</td>
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<tr>
<td>G ENTRY DOOR NO 2</td>
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<td>3.10</td>
<td>9 - 8</td>
</tr>
<tr>
<td>H STABILIZER</td>
<td>18 - 5</td>
<td>5.61</td>
<td>17 - 11</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.
2.4 INTERIOR ARRANGEMENTS

2.4.1 Interior Arrangements: Model 737-100
2.4.2 Interior Arrangements: Model 737-200

NOTES:
* 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: Model 737-200, Mixed Class

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: Model 737-200 Executive Interior Class
2.4.5 Interior Arrangements: Model 737-200 Passenger/Cargo Configuration
2.4.6 Interior Arrangements: Model 737-200C, All Cargo Configuration

- **Type 1 Aft Service Door**: 30 x 65 in (0.77 x 1.65 m)
- **Type 2 Emergency Exit**: 20 x 36 in (0.51 x 0.91 m)
- **Aft Airstairs (Stowed)**: 0.24 x 3.18 m
- **Aft Entry Door**: 0.24 x 2.75 m

<table>
<thead>
<tr>
<th>PALLET SIZE</th>
<th>VOLUME - 2 PALETS</th>
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</thead>
<tbody>
<tr>
<td>88 x 108 in (2.24 x 2.75 m)</td>
<td>455.4 CU FT</td>
</tr>
<tr>
<td>88 x 125 in (2.24 x 3.18 m)</td>
<td>560.4 CU FT</td>
</tr>
<tr>
<td>36 in (0.91 m)</td>
<td></td>
</tr>
<tr>
<td>100 in (2.54 m)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PALLET VOLUME</th>
<th>SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>455.4 CU FT</td>
<td>C-1</td>
</tr>
<tr>
<td>560.4 CU FT</td>
<td>C-1</td>
</tr>
<tr>
<td>356.4 CU FT</td>
<td>C-2</td>
</tr>
<tr>
<td>394.4 CU FT</td>
<td>C-2</td>
</tr>
<tr>
<td>390.4 CU FT</td>
<td>C-2</td>
</tr>
<tr>
<td>2730 CU FT</td>
<td>C-2</td>
</tr>
<tr>
<td>2762 CU FT</td>
<td>C-2</td>
</tr>
<tr>
<td>2743 CU FT</td>
<td>C-2</td>
</tr>
</tbody>
</table>

- **Type 1 Forward Service Door**: 30 x 65 in (0.77 x 1.65 m)
- **Closet**: 86 x 34.5 in (2.18 x 0.88 m)
- **Cargo Door Clear Opening**: 84.5 x 34 in (2.15 x 0.86 m)
- **Main Deck Cargo Volumes**:
  - 356.4 CU FT
  - 394.4 CU FT
  - 390.4 CU FT
  - 2730 CU FT
  - 2762 CU FT
  - 2743 CU FT
2.4.7 Interior Arrangements: Model 737-300

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

SINGLE CLASS
149 ECONOMY CLASS SEATS AT 30-IN PITCH

SINGLE CLASS
140 ECONOMY CLASS SEATS AT 32-IN PITCH

A ATTENDANT  C CLOSET  G GALLEY  L LAVATORY  S STOWAGE
2.4.8 Interior Arrangements: Model 737-400

**MIXED CLASS**
- 8 FIRST CLASS SEATS AT 36-IN (0.91 M) PITCH
- 138 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**
- 199 ECONOMY CLASS SEATS AT 32-IN PITCH

Legend:
- 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
- B: Closet
- C: Galley
- D: Lavatory
- E: 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 38-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

- ATTENDANT
- CLOSET
- GALLEY
- LAVATORY
- STOWAGE
2.4.14 Interior Arrangements: Model 737 BBJ, 737 BBJ2
2.4.15 Interior Arrangements: Model 737-900, -900 With Winglets

**First Class**
- 12 First Class seats at 56-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
2.4.16  Interior Arrangements: Model 737-900ER, 900ER With Winglets

**MIXED CLASS**
- 12 FIRST CLASS SEATS AT 16-IN PITCH
- 182 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
2.5 CABIN CROSS SECTIONS

2.5.1 Cabin Cross-Sections: Model 737-100, Six-Abreast Seating With Hatrack-Type Stowage System
2.5.2 Cabin Cross-Sections: Model 737-200, Four-Abreast Seating With “Wide-Body Look” Interior

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

83.0 IN (2.11 M)

57 IN (1.45 M)

23 IN (0.58 M)

22 IN (0.56 M)

7.5 IN (0.19 M)

20 IN (0.51 M)

SEE SECTION 2.6

148 IN (3.76 M)
2.5.3 Cabin Cross-Sections: Model 737-200, Five-Abreast Seating With Carry All Compartments
2.5.4 Cabin Cross-Sections: Model 737-300, -400, -500, -600, -700, -800, -900, BBJ1, BBJ2, Four-Abreast Model 737-200 With Advanced Technology Interior

NOTE: CABIN INTERIOR FOR BBJ1 AND BBJ2 AIRPLANES ARE DEPENDENT ON CUSTOMER OPTION.
2.5.5 Cabin Cross-Sections: Model 737-200 With Advanced Technology Interior and Model 737-300, -400, -500, -600, -700, -800, -900, Six-Abreast Seating

SEE SECTION 2.6
2.6 LOWER CARGO COMPARTMENTS

2.6.1 Lower Cargo Compartments: Model 737-100, All Models, Dimensions

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>DIMENSION A</th>
<th>DIMENSION B</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>18 FT 3 IN  (5.56 M)</td>
<td>11 FT 7 IN (3.53 M)</td>
</tr>
<tr>
<td>737-200</td>
<td>21 FT 5 IN (6.53 M)</td>
<td>14 FT 7 IN (4.45 M)</td>
</tr>
<tr>
<td>737-300</td>
<td>26 FT 5 IN (8.05 M)</td>
<td>16 FT 8 IN (5.08 M)</td>
</tr>
<tr>
<td>737-400</td>
<td>30 FT 5 IN (9.27 M)</td>
<td>22 FT 8 IN (6.91 M)</td>
</tr>
<tr>
<td>737-500</td>
<td>23 FT 1 IN (7.04 M)</td>
<td>12 FT 2 IN (3.71 M)</td>
</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: Model 737-100, -200, Capacities

<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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>370 CU FT</td>
<td>0</td>
<td>280 CU FT (7.93 CU M)</td>
<td>650 CU FT (18.41 CU M)</td>
</tr>
<tr>
<td>(10.48 CU M)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>737-200 AND ADVANCED 737-200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>505 CU FT</td>
<td>0</td>
<td>0</td>
<td>875 CU FT (24.79 CU M)</td>
</tr>
<tr>
<td>(14.31 CU M)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>370 CU FT</td>
<td>135 CU FT (3.83 CU M)</td>
<td>370 CU FT (10.48 CU M)</td>
<td>740 CU FT (20.96 CU M)</td>
</tr>
<tr>
<td>(10.48 CU M)</td>
<td>390 GAL (1,475 L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>270 CU FT</td>
<td>235 CU FT (6.66 CU M)</td>
<td></td>
<td>640 CU FT (18.13 CU M)</td>
</tr>
<tr>
<td>(7.65 CU M)</td>
<td>810 GAL (3,065 L)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.6.3 Lower Cargo Compartments: Model 737-300, -400, -500, Capacities

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>AFT CARGO COMPARTMENT</th>
<th>FORWARD</th>
<th>TOTAL BULK</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODEL</td>
<td>BULK CARGO</td>
<td>AUXILIARY FUEL TANK CAPACITY</td>
<td>AUXILIARY FUEL TANK COMPARTMENT CAPACITY</td>
<td>COMPARTMENT BULK CARGO</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>-------------------------------</td>
<td>------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>737-300</td>
<td>643 CU FT (18.2 CU M)</td>
<td>0</td>
<td>0</td>
<td>425 CU FT (12.0 CU M)</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></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></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></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></td>
</tr>
<tr>
<td>737-400</td>
<td>766 CU FT (21.7 CU M)</td>
<td>0</td>
<td>0</td>
<td>607 CU FT (17.2 CU M)</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></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></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></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></td>
</tr>
<tr>
<td>737-500</td>
<td>535 CU FT (15.1 CU M)</td>
<td>0</td>
<td>0</td>
<td>287 CU FT (8.1 CU M)</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></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></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></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></td>
</tr>
</tbody>
</table>

NOTES
1. WITHOUT AUXILIARY FUEL TANK
2. WITH BOEING-INSTALLED AUXILIARY FUEL TANK
3. WITH ROGERSON-INSTALLED AUXILIARY FUEL TANK
### 2.6.4 Lower Cargo Compartments: Model 737-600, -700, -800, -900, -900ER With and Without Winglets, Capacities

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>AFT CARGO COMPARTMENT</th>
<th>FORWARD COMPARTMENT BULK CARGO</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>268 CU FT (7.6 CU M)</td>
<td>756 CU FT (21.4 CU M)</td>
<td>(1)</td>
</tr>
<tr>
<td>737-700</td>
<td>596 CU FT (16.9 CU M)</td>
<td>406 CU FT (11.5 CU M)</td>
<td>1,002 CU FT (28.4 CU M)</td>
<td>(1)</td>
</tr>
<tr>
<td>737-800</td>
<td>899 CU FT (25.5 CU M)</td>
<td>692 CU FT (19.6 CU M)</td>
<td>1,591 CU FT (45.1 CU M)</td>
<td>(1)</td>
</tr>
<tr>
<td>737-900</td>
<td>1,012 CU FT (28.7 CU M)</td>
<td>840 CU FT (23.8 CU M)</td>
<td>1,852 CU FT (52.5 CU M)</td>
<td>(1)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>996 CU FT (28.2 CU M)</td>
<td>830 CU FT (23.5 CU M)</td>
<td>1,826 CU FT (51.7 CU M)</td>
<td>(2)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>843 CU FT (23.9 CU M)</td>
<td>520 GAL (1,968 L)</td>
<td>1,673 CU FT (47.7 CU M)</td>
<td>(3)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>755 CU FT (21.4 CU M)</td>
<td>962 GAL (3,641 L)</td>
<td>1,585 CU FT (44.9 CU M)</td>
<td>(4)</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
### 2.6.5 Lower Cargo Compartments: Model 737BBJ, 737 BBJ2, Capacities

<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>
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<tr>
<td>737 BBJ</td>
<td></td>
<td>CU FT</td>
<td>CU M</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
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<td>10.7</td>
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<td>0</td>
<td>0</td>
<td>377</td>
<td>10.7</td>
</tr>
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<td>2</td>
<td>181</td>
<td>5.1</td>
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<tr>
<td>2</td>
<td>2</td>
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<td>181</td>
<td>5.1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>127</td>
<td>3.6</td>
</tr>
<tr>
<td>4</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>0</td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>662</td>
<td>18.8</td>
</tr>
<tr>
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<td>1</td>
<td>662</td>
<td>18.8</td>
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<td>13.3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>468</td>
<td>13.3</td>
</tr>
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</table>
2.7 DOOR CLEARANCES

2.7.1 Door Clearances: Model 737, All Models, Forward Main Entry Door No. 1

[Diagram showing door clearances and dimensions]
2.7.2 Door Clearances: Model 737, All Models, Optional Forward Airstairs, Main Entry Door No 1
2.7.3 Door Clearances: Models 737-100, -200, -300, -400, -500, Locations of Sensors and Probes – Forward of Main Entry Door No 1

Correction to existing erroneous data; jpc 11 December 2012

<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>9 FT 10 IN (3.0 M)</td>
<td>+10 IN (0.25 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ALTERNATE PITOT-STATIC (R)</td>
<td>9 FT 10 IN (3.0 M)</td>
<td>-9 IN (-0.23 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ANGLE OF ATTACK (L/R)</td>
<td>9 FT 10 IN (3.0 M)</td>
<td>-1 IN (-0.03 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: Models 737-600, -700, -800, -900ER, -BBJ, -BBJ2, Locations of Sensors and Probes – Forward of Main Entry Door No 1

<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 2 in (1.57 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 2 in (1.57 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>-6 in (-0.15 m)</td>
<td>4 in (0.10 m)</td>
</tr>
<tr>
<td>TOTAL AIR TEMPERATURE (L)</td>
<td>11 ft 6 in (3.50 m)</td>
<td>+ 1 ft 6 in (0.46 m)</td>
<td>4 in (0.10 m)</td>
</tr>
</tbody>
</table>
2.7.5 Door Clearances: Model 737, All Models, Forward Service Door

Diagram showing dimensions and clearances related to the forward service door of the Boeing 737 models. The diagram includes various measurements and labels indicating clearances and positions for the door components.
2.7.6 Door Clearances: Model 737, All Models, Aft Entry Door and Aft Service Door

-100: 70 FT 0 IN (21.34 m)
-200: 64 FT 4 IN (23.27 m)
-300: 56 FT 5 IN (26.04 m)
-400: 49 FT 1 IN (29.88 m)
-500: 42 FT 1 IN (26.04 m)
-600: 35 FT 7 IN (26.50 m)
-700: 28 FT 5 IN (26.04 m)
-800: 21 FT 7 IN (31.88 m)
-900: 14 FT 1 IN (32.29 m)

AFT ENTRY DOOR (LEFT)
30 x 72 IN (0.76 x 1.83 m)
AFT SERVICE DOOR (RIGHT)
30 x 65 IN (0.76 x 1.65 m)

Hinge
Intermediate Position
Upper Hinge
Lower Hinge
Top of Threshold

69.5 IN (1.77 m) LEFT
62.5 IN (1.59 m) RIGHT

40 IN (1.02 m) DOOR THRESHOLD TO MAXIMUM EXTREMITY OF DOOR

3.38 IN (0.09 m) FORWARD VIEW

CLOSED POSITION
CONTOUR AT MAXIMUM HALF BREATH

36 IN (0.91 m) DOOR OPENED TO EXTREMITY

Hinge Point
Stowed Position
Escape Slide Pack

SECTION A-A

36.5 IN (0.93 m)

Intermediate Position

30 IN (0.76 m)

FWD INBD

REV A
September 2020
2.7.7 Door Clearances: Model 737-100, 200, AFT Entry Door With Optional Airstair

TO NOSE
-100: 70 FT 0 IN (21.34 m)
-200: 76 FT 4 IN (23.27 m)

LEFT SIDE VIEW

ENTRY DOOR (CLOSED)
AFT AIRSTAIR (STOWED)
AFT AIRSTAIR (UNFOLDING)

REAR VIEW

60 IN (1.52 m)
46.8 IN (1.19 m)

AFT ENTRY DOOR
AFT AIRSTAIR (EXTENDED)

GROUND LINE

62 IN (1.58 m)
193 IN (4.90 m) MAX
167 IN (4.24 m) MIN

PROGRAMMING ARM
STAIR HINGE POINT
G AIRPLANE
2.7.8 Door Clearances: Model 737-100, -200, -300, -400, -500, 600, 700, -800, -900, BBJ1, BBJ2, Lower Deck Cargo Compartments

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>DOOR SIZE (C x B)</th>
<th>CLEAR OPENING (A x B)</th>
<th>DISTANCE FROM NOSE TO DOOR CL (D)</th>
<th>DOOR SIZE (C x B)</th>
<th>CLEAR OPENING (A x B)</th>
<th>DISTANCE FROM NOSE TO DOOR CL (E)</th>
</tr>
</thead>
<tbody>
<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>
<td>26 FT 4.5 IN (8.03 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>60 FT 3.5 IN (18.37 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>
<td>28 FT 0.25 IN (8.54 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>63 FT 10.5 IN (19.47 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>
<td>28 FT 0.25 IN (8.54 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>72 FT 6.5 IN (22.11 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>
<td>28 FT 0.25 IN (8.54 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>82 FT 6.5 IN (25.16 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>
<td>24 FT 8.25 IN (7.52 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>64 FT 8.5 IN (19.72 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>
<td>24 FT 8.25 IN (7.52 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>64 FT 8.5 IN (19.72 M)</td>
</tr>
<tr>
<td>737-700</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>
<td>28 FT 0.25 IN (8.54 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>72 FT 6.5 IN (22.11 M)</td>
</tr>
<tr>
<td>737-800</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>
<td>28 FT 0.25 IN (8.54 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>91 FT 8.5 IN (27.95 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>
<td>28 FT 0.25 IN (8.54 M)</td>
<td>48 x 48 IN (1.22 x 1.22 M)</td>
<td>33 x 48 IN (0.84 x 1.22 M)</td>
<td>100 FT 4.5 IN (30.59 M)</td>
</tr>
</tbody>
</table>
2.7.9 Door Clearances: Model 737-200C, Main Deck Cargo Door

**Diagram:**
- **Main Deck Cargo Door**: 86 x 134 in (2.19 x 3.40 m)
- **Clear Door Opening**: 84.5 x 134 in (2.15 x 3.24 m)

**Dimensions:**
- **25 FT (7.62 M)**

**Notes:**
- Transfer system hardware:
  - High profile: 2.06 in (0.05 m)
  - Low profile: 0.25 in (0.03 m)

**Rear View:**
- **Door In Canopy Position**
- **Door Full Open**
- **Door Closed**

**Notes:**
- Exposed floor width for crane loading in full open position

**Diagram Details:**
- 124 in (3.15 m)
- 45 in (1.14 m)
- 83.4 in (2.15 m) Clear Height
2.7.10 Door Clearances: Model 737-700C, Main Deck Cargo Door

MAIN DECK CARGO DOOR
86 x 134 IN (2.19 x 3.40 M)
CLEAR DOOR OPENING
84.5 x 134 IN (2.15 x 3.24 M)

LEFT SIDE VIEW

CARGO DOOR IN
FULL OPEN POSITION
(156.9° ROTATION FROM
DOOR CLOSED POSITION)

CARGO DOOR IN
CANOPY POSITION
(88.1° ROTATION FROM
DOOR CLOSED POSITION)

STOWAGE BIN

LOWEST POINT WHEN
THE DOOR IS IN THE
CANOPY POSITION

83.7 IN (2.13 M)
CLEAR HEIGHT

TOP OF ROLLERS
TOP OF FLOOR

REAR VIEW
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</td>
<td>METERS</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2,000</td>
<td>610</td>
</tr>
<tr>
<td>4,000</td>
<td>1,219</td>
</tr>
<tr>
<td>6,000</td>
<td>1,829</td>
</tr>
<tr>
<td>8,000</td>
<td>2,438</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 PAYLOAD/RANGE FOR LONG RANGE CRUISE

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
* JT9D-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 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

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT
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
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-1 OR CFM56-3B-2 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

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
3.2.8 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

DO NOT USE FOR DISPATCH

Payload/Range
737-600 (CFM56-7B Series)

- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEED
- TYPICAL MISSION RULES
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

MAX ZERO FUEL WEIGHT = 114,000 LB (51,710 KG)

BRAKE RELEASE GROSS WEIGHT (X 1,000) 
145.5 (660) 
140 (632) 
135 (612) 
130 (590) 
125 (567) 
120 (550) 
115 (532) 
110 (522) 
105 (510) 
100 (478) 
95 (441) 

FUEL CAPACITY 
46,063 (20,894)

0 1 2 3 4 5 6
1,000 NAUTICAL MILES

70 75 80 85 90 95 100 105 110 115
1,000 POUNDS

35 40 45 50 55 60 65 70 75 80
3.2.10 Payload/Range for Long Range Cruise: Model 737-700

DO NOT USE FOR DISPATCH

Payload/Range
737-700/-700W (CFM56-7B Series)

- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

![Diagram of Payload/Range for Long Range Cruise](image-url)
3.2.11 Payload/Range for Long Range Cruise: Model 737-700ER

DO NOT USE FOR DISPATCH

Payload/Range
737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B Series)

- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

MAX ZERO FUEL WEIGHT = 126,000 LB (57,153 KG)

FUEL CAPACITY
71,737 (32,539)

1,000 NAUTICAL MILES RANGE

OEW PLUS PAYLOAD (1,000 KILOGRAMS)

1,000 POUNDS
3.2.12 Payload/Range for Long Range Cruise: Model 737-800

DO NOT USE FOR DISPATCH

Payload/Range

737-800/800W/BBJ2 (CFM56-7B Series)

- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.
3.2.13 Payload/Range for Long Range Cruise: Model 737-900

DO NOT USE FOR DISPATCH

Payload/Range

737-900/-900W (CFM56-7B Series)

- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

![Diagram showing payload and range for Model 737-900 with fuel weight and range parameters.]
3.2.14 Payload/Range for Long Range Cruise: Model 737-900ER

DO NOT USE FOR DISPATCH

Payload/Range
737-900ER/900ERW/BBJ3 (CFM56-7B Series)

- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

![Graph showing Payload/Range for Long Range Cruise: Model 737-900ER](image_url)

MAX ZERO FUEL WEIGHT = 149,300 LB (67,721 KG)

DECREASING FUEL CAPACITY

GROSS WEIGHT (K-1,000)

187.7 (85.2)
185.5 (84.1)
183.3 (83.1)
181.1 (82.1)
178.9 (81.0)
176.7 (80.0)
174.5 (79.0)
172.3 (78.0)
170.1 (77.0)
167.9 (76.0)
165.7 (75.0)
163.5 (74.0)
161.3 (73.0)
159.1 (72.0)
156.9 (71.0)
154.7 (70.0)
152.5 (69.0)
150.3 (68.0)
148.1 (67.0)
145.9 (66.0)
143.7 (65.0)
141.5 (64.0)
139.3 (63.0)
137.1 (62.0)
134.9 (61.0)
132.7 (60.0)
130.5 (59.0)
128.3 (58.0)
126.1 (57.0)
123.9 (56.0)
121.7 (55.0)
119.5 (54.0)
117.3 (53.0)
115.1 (52.0)
112.9 (51.0)
110.7 (50.0)
108.5 (49.0)
106.3 (48.0)
104.1 (47.0)
101.9 (46.0)
99.7 (45.0)
97.5 (44.0)
95.3 (43.0)
93.1 (42.0)
90.9 (41.0)
88.7 (40.0)
86.5 (39.0)
84.3 (38.0)
82.1 (37.0)
79.9 (36.0)
77.7 (35.0)
75.5 (34.0)
73.3 (33.0)
71.1 (32.0)
68.9 (31.0)
66.7 (30.0)
64.5 (29.0)
62.3 (28.0)
60.1 (27.0)
57.9 (26.0)
55.7 (25.0)
53.5 (24.0)
51.3 (23.0)
49.1 (22.0)
46.9 (21.0)
44.7 (20.0)
42.5 (19.0)
40.3 (18.0)
38.1 (17.0)
35.9 (16.0)
33.7 (15.0)
31.5 (14.0)
29.3 (13.0)
27.1 (12.0)
24.9 (11.0)
22.7 (10.0)
20.5 (9.0)
18.3 (8.0)
16.1 (7.0)
13.9 (6.0)
11.7 (5.0)
9.5 (4.0)
7.3 (3.0)
5.1 (2.0)
2.9 (1.0)
3.3  F.A.R. AND J.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

3.3.1  F.A.R. Takeoff Runway Length Requirements - Standard Day: Model 737-100 (JT8D-7 Engines)

NOTES:
* NO ENGINE AIR BLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADE
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-7 ENGINES

![Diagram of takeoff runway length requirements](image-url)
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
3.3.3  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

![Graph showing takeoff runway length requirements for 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

---

**Standard Day + 27°F (STD + 15°C)**

- 210 MPH (338 KMPH) TIRE SPEED LIMIT
- 200 MPH (322 KMPH) TIRE SPEED LIMIT
- MAX BRAKE ENERGY LIMIT
- MAX DESIGN TAKEOFF WEIGHT: 115,500 LB (52,460 KG)

---

**Operational Takeoff Weight**

- 70 - 120,000 LBS (31.8 - 54.5 TONS)
- 70 - 54.5 TONS
3.3.5  F.A.R. Takeoff Runway Length Requirements - Standard Day: Model Advanced 737-200 (JT8D-15/15A Engines)

NOTES:
* NO ENGINE AIRLINED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-15/15A ENGINES

[Diagram showing takeoff runway length requirements for Model Advanced 737-200 with JT8D-15/15A engines]

NOTES:
* NO ENGINE AIRões FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY gradient
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-15/15A ENGINES

![Diagram showing F.A.R. Takeoff Runway Length Requirements](image-url)
3.3.7 F.A.R. Takeoff Runway Length Requirements - Standard Day: Model Advanced 737-200 (JT8D-17/17A Engines)

NOTES:
* NO ENGINE AIRCITED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* 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)

NOTES:
- NO ENGINE AIRBLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- 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 AIRCREEF FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-17R/17AR ENGINES

[Graph and data related to F.A.R. takeoff runway length requirements for Model Advanced 737-200 with JT8D-17R/17AR engines.]

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADE
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-17R/17AR ENGINES

![Diagram of F.A.R. Takeoff Runway Length Requirements](image-url)
3.3.11 F.A.R. Takeoff Runway Length Requirements - Standard Day: Model 737-300 (CFM56-3B1 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
3.3.12 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

![Diagram](image-url)
3.3.13 F.A.R. Takeoff Runway Length Requirements - Standard Day: 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

---

**STANDARD DAY**

- 225 MPH (362 KMPH) **TIRE SPEED LIMIT**
- 210 MPH (338 KMPH) **TIRE SPEED LIMIT**

---

**F.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 (609.6)
- SEA LEVEL

**MAX DESIGN TAKEOFF WEIGHT:**
- 139,500 LB (63,270 KG)

---

**OPERATIONAL TAKEOFF WEIGHT**

- 42
- 44
- 46
- 48
- 50
- 52
- 54
- 56
- 58
- 60
- 62
- 64

---

10,000 POUNDS

1,000 KILOGRAMS
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

![Diagram showing F.A.R. takeoff runway length requirements for Model 737-300 with CFM56-3B-2 engines at 22,000 LB SLST. The diagram illustrates the relationship between F.A.R. takeoff runway length, airport elevation, and operational takeoff weight.]

- STANDARD DAY + 27°F (STD + 15°C)
- 225 MPH (362 KMPH) TIRE SPEED LIMIT
- MAX BRAKE ENERGY LIMIT
- 210 MPH (338 KMPH) TIRE SPEED LIMIT

Operational Takeoff Weight: 139,500 LB (63,270 KG)
3.3.15 F.A.R. Takeoff Runway Length Requirements - Standard Day: Model 737-400 (CFM56-3B-2 Engines at 22,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADE
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56–3B2 ENGINES RATED AT 22,000 LB SLST

![Graph showing takeoff runway length requirements](image-url)
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
* CFM 56-3C1 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

225 MPH (362 KMPH)
TIME SPEED LIMIT

STANDARD DAY + 27°F
(STD + 15°C)

MAX BRAKE ENERGY LIMIT

210 MPH (338 KMPH)
TIME SPEED LIMIT

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

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

AIRPORT ELEVATION
FEET (METERS):
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (609.6)
SEA LEVEL

MAX DESIGN TAKEOFF WEIGHT
150,000 LB (68,040 KG)

MAX TAKEOFF WEIGHT
100,000 LB (45,360 KG)

1,000 POUNDS
1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
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

---

**STANDARD DAY**

- 210 MPH (338 KMPH) TIRE SPEED LIMIT
- MAX BRAKE ENERGY LIMIT

---

**F.A.R. TAKEOFF RUNWAY LENGTH**

<table>
<thead>
<tr>
<th>1,000 POUNDS</th>
<th>1,000 METERS</th>
</tr>
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<tr>
<td>42</td>
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<td>60</td>
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<tr>
<td>62</td>
<td>64</td>
</tr>
</tbody>
</table>

---

**OPERATIONAL TAKEOFF WEIGHT**

- MAX DESIGN TAKEOFF WEIGHT: 133,500 LB (60,550 KG)

---

**AIRPORT ELEVATION FEET (METERS)**

- 8,000 (2,438)
- 6,000 (1,829)
- 4,000 (1,219)
- 2,000 (609.6)
- SEA LEVEL

---

**FLAPS**

- FLAPS 15
- FLAPS 5
3.3.20 F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F (STD + 15°C): Model 737-500 (CFM56-3B1 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

![Diagram showing F.A.R. takeoff runway length requirements for a Model 737-500 aircraft with CFM56-3B1 engines at standard day conditions with a 27°F (STD + 15°C) temperature. The diagram illustrates the relationship between the operational takeoff weight and the required runway length at various airport elevations and flap configurations. Key specifications include:
- 225 MPH (362 KMPH) tire speed limit
- 210 MPH (338 KMPH) tire speed limit
- Max brake energy limit
- Airport elevation in feet and meters
- Max design takeoff weight 134,500 lb (60,550 kg)]
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

[Diagram of takeoff runway length requirements for Model 737-500 with various weight and elevation conditions]
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)

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

---

[Diagram showing F.A.R. Takeoff Runway Length Requirements for Model 737-500 with CFM56-3B-1 Engines at 18,500 LB SLST, indicating various runway lengths for different airport elevations and operational takeoff weights.]
3.3.23 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-600 (CFM56-7B18/-7B20 Engines at 20,000 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/-7B20 Engines at 20,000 LB SLST)

[Graph showing takeoff runway length requirements with various conditions and operational takeoff weight.]
3.3.25  F.A.R. Takeoff Runway Length Requirements - Standard Day + 40°F (STD + 22.2°C), Dry Runway: Model 737-600 (CFM56-7B18/-7B20 Engines at 20,000 LB SLST)
3.3.26  F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35 °C), Dry Runway: Model 737-600 (CFM56-7B18/-7B20 Engines at 20,000 LB SLST)
3.3.27  F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-600 (CFM56-7B22 Engines at 22,000 LB SLST)
3.3.28  F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F (STD + 15°C), Dry Runway: Model 737-600 (CFM56-7B22 Engines at 22,000 LB SLST)
3.3.29  F.A.R. Takeoff Runway Length Requirements - Standard Day + 45°F (STD + 25°C), Dry Runway: Model 737-600 (CFM56-7B22 Engines at 22,000 LB SLST)
3.3.30 F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35 °C), Dry Runway: Model 737-600 (CFM56-7B22 Engines at 22,000 LB SLST)
3.3.31 **F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-700 (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)**

*DO NOT USE FOR DISPATCH*

Takeoff Runway Length Requirements
737-700/-700W (CFM56-7B20/-7B22/-7B24)

**NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.**

- Consult using airline for specific operating procedures prior to facility design.

**STANDARD DAY**

15,000-LB. (70,000 KS)

MAX TAKEOFF WT.

**THE SPEED LIMIT**

125 MPH (200 KM/H)

1,000 METERS

1,000 FEET

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

45

50

55

60

65

70
3.3.32  F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F (STD + 15°C), Dry Runway: Model 737-700 (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)
3.3.33  F.A.R. Takeoff Runway Length Requirements - Standard Day + 40°F (STD + 22.2°C), Dry Runway: Model 737-700 (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)
3.3.34  F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35 °C), Dry Runway: Model 737-700 (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)
3.3.35 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-700/-700W (CFM56-7B26 Engines at 26,000 LB SLST)
3.3.36 F.A.R. Takeoff Runway Length Requirements - Standard Day, \(+27^\circ\text{F (STD + 15°C)},\) Dry Runway: Model 737-700/-700W (CFM56-7B26 Engines at 26,000 LB SLST)
3.3.37 F.A.R. Takeoff Runway Length Requirements - Standard Day + 45°F (STD + 25°C), Dry Runway: Model 737-700/-700W (CFM56-7B26 Engines at 26,000 LB SLST)
3.3.38 F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F
(Std + 35 °C), Dry Runway; Model 737-700/700W (CFM56-7B26 Engines at 26,000 Lb SLST)

Takeoff Runway Length Requirements
737-700/700W (CFM56-7B26)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

DO NOT USE FOR DISPATCH

TIRE SPEED LIMIT

225 MPH (362 KMPH)

MAX TAKOFF WT

145,500 LB (66,000 KG)

PRESURE ALTITUDE

FEET (METERS)

(3,000 906)

(6,000 1,829)

(12,000 3,660)

(20,000 6,096)

SEA LEVEL

TEMPERATURE

CELSIUS

-30.2

-30.1

-29.2

-30.5

-30.8

-31.1

-31.2

STANDARD DAY + 63.0 °F
(Std + 35.0 °C)

OPERATIONAL TAKEOFF WEIGHT

1,000 KILOGRAMS

1,000 POUNDS

1,000 METERS

1,000 FEET

REVA

D6-53325-6

September 2020

3.53
3.3.39 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)
3.3.40 F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F (STD + 15°C), Dry Runway: Model 737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)
3.3.41 F.A.R. Takeoff Runway Length Requirements - Standard Day + 40°F (STD + 22.2°C), Dry Runway: Model 737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)
3.3.42 F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35 °C), Dry Runway: Model 737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24 Engines at 20,000 LB SLST)
3.3.43 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 Engines at 26,000 LB SLST)

Diagram showing takeoff runway length requirements for various runway conditions and weights. The diagram includes labels such as 'DO NOT USE FOR DISPATCH,' 'MAXIMUM WT,' 'TOWING SPEED,' 'APPROACH,' 'Landing Weight,' 'Power Setting,' 'Weight,' 'Runway,' 'Takeoff Field Length,' 'Takeoff Runway Length Requirements,' 'Takeoff Runway Length Requirements 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 737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 Engines at 26,000 LB SLST)
3.3.45 F.A.R. Takeoff Runway Length Requirements - Standard Day + 45°F (STD + 25°C), Dry Runway: Model 737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 Engines at 26,000 LB SLST)
3.3.46 F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35 °C), Dry Runway; Model 737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 Engines at 26,000 LB SLST)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.47 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-800/-800W/BBJ2 (CFM56-7B27-B1 Engine at 26,000 LB SLST)
3.3.48 F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F
(STD + 15°C), Dry Runway: Model 737-800/-800W/BBJ2 (CFM56-7B27-B1 Engine at 26,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-800/-800W/BBJ2 (CFM56-7B27-B1)

- Winglet, Short Field Package, and Carbon Brakes Performance Shown.
- Non-Winglet and Non Short Field Package Aircraft Will Have Slightly Worse Performance.
- Consult Using Airline for Specific Operating Procedure Prior to Facility Design.

325 MPH (520 KMPH)
TIRE SPEED LIMIT

STANDARD DAY + 27°F
(STD + 15°C)

PRESSURE ALTITUDE
FEET (METERS)
10,000 (3,048)
8,000 (2,438)
6,000 (1,829)
5,000 (1,524)
4,000 (1,219)
3,000 (914)
SEA LEVEL

TEMPERATURE
(CELSIUS)
10.2
18.1
22.1
30.0

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

TAKING OFF FIELD LENGTH
1,000 METERS

1,000 FEET

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
3.3.49 F.A.R. Takeoff Runway Length Requirements - Standard Day + 45°F (STD + 25°C), Dry Runway: Model 737-800/800W/BBJ2 (CFM56-7B27/B1 Engine at 26,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-800 / 800W/BBJ2 (CFM56-7B27-B1)

- WINGLET, SHORT FIELD PACKAGE, AND CARBON BRAKES PERFORMANCE SHOWN.
- NON-WINGLET AND NON SHORT FIELD PACKAGE AIRCRAFT WILL HAVE SLIGHTLY WORSE PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

![Graph showing takeoff runway length requirements](image-url)

- STANDARD DAY + 45°F (STD + 25°C)
  - 225 MPH (362 KMPH)
  - TIRE SPEED LIMIT

- PRESSURE ALTITUDE:
  - 10,000 (3,048)
  - 8,000 (2,438)
  - 6,000 (1,829)
  - 4,000 (1,219)
  - 2,000 (610)
  - SEA LEVEL

- TEMPERATURE:
  - 24°C
  - 20°C
  - 16°C

- OPERATIONAL TAKEOFF WEIGHT:
  - MAX TAKEOFF WT: 174,200 LB (79,010 KG)

- 1,000 KILOGRAMS
- OPERATIONAL TAKEOFF WEIGHT
3.3.50 F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35°C), Dry Runway: Model 737-800/-800W/BBJ2 (CFM56-7B27-B1 Engine at 26,000 LB SLST)
3.3.51 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry
Engines at 26,000 LB SLST

Model 737-800/800W/BBJ2 (CFM56-7B24/7B26/7B27)

Takeoff Runway Length Requirements

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.52 F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F (STD + 15°C), Dry Runway: Model 737-800 / -800W / BBJ2 (CFM56-7B24/-7B26/-7B27 Engines at 26,000 LB SLST)
3.3.53 F.A.R. Takeoff Runway Length Requirements - Standard Day + 45°F (STD + 25°C), Dry Runway: Model 737-800 / -800W / BBJ2 (CFM56-7B24/-7B26/-7B27 Engines at 26,000 LB SLST)
DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-800/-800W/BBJ2 (CFM56-7B24/-7B26/-7B27)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.55 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-900/900W (CFM56-7B24/-7B26 Engines at 24,000 LB SLST)

**Takeoff Runway Length Requirements**

737-900/900W (CFM56-7B24/-7B26)

- Non-winglet performance shown. Winglet aircraft will have slightly improved performance.
- Consult using airline for specific operating procedure prior to facility design.

**Graph:**

- Standard Day
- 225 MPH (362 KMPH)
- Tire speed limit

<table>
<thead>
<tr>
<th>Takeoff Field Length</th>
<th>Operational Takeoff Weight</th>
</tr>
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<tbody>
<tr>
<td>1,000 Meters</td>
<td>1,000 Kilograms</td>
</tr>
<tr>
<td>1,000 Feet</td>
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<td>15</td>
<td>210</td>
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</tbody>
</table>

**Graph Parameters:**

- Pressure Altitude
- Temperature (Celsius)
- Takeoff Weight
- Operational Takeoff Weight
- Takeoff Runway Length
- Tire Speed Limit

**Note:**

DO NOT USE FOR DISPATCH

**Disclaimer:**

- Dry Runway
- Zero Wind
- Zero Runway Gradient
- Air Conditioning Off
- Optimum Flap Setting
3.3.56 F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F (STD + 15°C), Dry Runway: Model 737-900/-900W (CFM56-7B24/-7B26 Engines at 24,000 LB SLST)
3.3.57  F.A.R. Takeoff Runway Length Requirements - Standard Day + 45°F (STD + 25°C), Dry Runway: Model 737-900/-900W (CFM56-7B24/-7B26 Engines at 24,000 LB SLST)
3.3.58 F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35 °C), Dry Runway: Model 737-900/-900W (CFM56-7B24/-7B26 Engines at 24,000 LB SLST)
3.3.59 F.A.R. Takeoff Runway Length Requirements - Standard Day, Dry Runway: Model 737-900ER/-900ERW/BBJ3 (CFM56-7B26/-7B27 Engines at 26,000 LB SLST)
3.3.60 F.A.R. Takeoff Runway Length Requirements - Standard Day + 27°F (STD + 15°C), Dry Runway: Model 737-900ER/-900ERW/BBJ3 (CFM56-7B26/-7B27 Engines at 26,000 LB SLST)
3.3.61 F.A.R. Takeoff Runway Length Requirements - Standard Day + 45°F (STD + 25°C), Dry Runway: Model 737-900ER/900ERW/BBJ3 (CFM56-7B26/-7B27 Engines at 26,000 LB SLST)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.62 F.A.R. Takeoff Runway Length Requirements - Standard Day + 63°F (STD + 35 °C), Dry Runway: Model 737-900ER/-900ER/BBJ3 (CFM56-7B26/-7B27 Engines at 6,000 LB SLST)
### 3.3.63 ICAO Aerodrome Reference Code – All Models

The airplane is certified to operate up to its maximum takeoff weight (MTOW). The airplane flight manual provides field length requirements up to MTOW. The airplane reference code can vary for some models based on the airplane takeoff weight up to MTOW.

The following table shows the ICAO Aerodrome Reference Code classification for all models.

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>TAKEOFF WEIGHT LB (KG)</th>
<th>AERODROME REFERENCE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-600</td>
<td>145,500 (65,997)</td>
<td>3C</td>
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<tr>
<td>737-700</td>
<td>154,500 (70,080)</td>
<td>3C</td>
</tr>
<tr>
<td>737-800</td>
<td>165,788 (75,200)</td>
<td>3C</td>
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<td>737-800</td>
<td>174,200 (79,016)</td>
<td>4C</td>
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<tr>
<td>737-900</td>
<td>143,400 (65,000)</td>
<td>3C</td>
</tr>
<tr>
<td>737-900</td>
<td>174,200 (79,016)</td>
<td>4C</td>
</tr>
</tbody>
</table>

The reference takeoff weights are given for information only and not intended for dispatch purposes. Consult airline for specific operating procedures prior to facility design.
3.4 F.A.R. AND J.A.R. LANDING RUNWAY LENGTH REQUIREMENTS

3.4.1 F.A.R. Landing Runway Length Requirements - Flaps 40: Model 737-100

NOTES:
* $V_{app} = 1.3V_S$
* ZERO WIND
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

---

65 70 75 80 85 90 95 100 105 110 115
1,000 POUNDS

3 4 5 6 7 8 9
1,000 FEET

3 4 5 6 7
1,000 METERS

1,000 KILOGRAMS OPERATIONAL LANDING WEIGHT

FLAPS 40

MAX DESIGN LANDING WEIGHT 99,000 LB (44,900 KG)

WET RUNWAY DRY RUNWAY
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

![Diagram of F.A.R. Landing Runway Length Requirements - Flaps 30: Model 737-100]
3.4.3  F.A.R. Landing Runway Length Requirements - Flaps 25: Model 737-100

**NOTES:**
* \( V_{APP} = 1.3V_{S} \)
* ZERO WIND
* FLAP POSITION 25
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

---

**FLAPS 25**

MAXIMUM LANDING WEIGHT
99,000 LB (44,900 KG)

FAA LANDING RUNWAY LENGTH
1,000 METERS

FAA LANDING RUNWAY
1,000 FEET

WET RUNWAY
DRY RUNWAY

AIRPORT ELEVATION
FEET METERS
6,000 1,829
4,000 1,219
2,458
4,000 1,219
6,000 1,829

SEA LEVEL
3.4.4  F.A.R. Landing Runway Length Requirements - Flaps 40:
Model 737-200, -200C

NOTES:
- \( V_{\text{APP}} = 1.3 V_{S} \)
- ZERO WIND
- FLAP POSITION 40
- AUTOMATIC SPEED BRAKES
- CONSULT WITH USING AIRLINE FOR SPECIFIC
  PROCEDURE PRIOR TO FACILITY DESIGN

---

**FLAPS 40**

MAX DESIGN LANDING WEIGHT
103,000 LB (46,710 KG)

<table>
<thead>
<tr>
<th>Airport Elevation</th>
<th>F.A.R. Landing Runway Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feet</td>
<td>1,000 Meters</td>
</tr>
<tr>
<td>6,000</td>
<td>2,438</td>
</tr>
<tr>
<td>4,000</td>
<td>1,219</td>
</tr>
<tr>
<td>8,000</td>
<td>2,438</td>
</tr>
<tr>
<td>SEA LEVEL</td>
<td>1,219</td>
</tr>
</tbody>
</table>

WET RUNWAY

DRIY RUNWAY
3.4.5  F.A.R. Landing Runway Length Requirements - Flaps 30:
Model 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

[Graph showing F.A.R. Landing Runway Length Requirements for Flaps 30 on Model 737-200, -200C]
3.4.6  F.A.R. Landing Runway Length Requirements - Flaps 25: Model 737-200, -200C

NOTES:
* \( V_{APP} = 1.3V_S \)
* ZERO WIND
* FLAP POSITION 25
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

![Diagram showing F.A.R. Landing Runway Length Requirements - Flaps 25: Model 737-200, -200C](image-url)
3.4.7 F.A.R. Landing Runway Length Requirements - Flaps 40: Model Advanced 737-200, -200C

NOTES:
* \( V_{APP} = 1.3 V_S \)
* ZERO WIND
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

Max design landing weight 107,000 lb (48,530 kg)
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

---

**FLAPS 30**

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

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

---

AIRPORT ELEVATION
FEET
METERS
6,000
1,829
4,000
1,219
SEA LEVEL

---

WET RUNWAY
DRY RUNWAY

---

OPERATIONAL LANDING WEIGHT
1,000 POUNDS
1,000 KILOGRAMS

---

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3.4.9 F.A.R. Landing Runway Length Requirements - Flaps 15: Model Advanced 737-200, -200C

NOTES:
* Vapp = 1.3Vs
* Zero Wind
* Flap Position 25
* Automatic Speed Brakes
* Consult with using airline for specific procedure prior to facility design

![Graph showing F.A.R. Landing Runway Length Requirements for Flaps 15: Advanced 737-200, -200C](image-url)
3.4.10 F.A.R. Landing Runway Length Requirements - Flaps 40:
Model 737-300

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
3.4.11 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
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 GRADE
* FLAP POSITION 15
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN
3.4.13 F.A.R. Landing Runway Length Requirements - Flaps 40: Model 737-400

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
3.4.14 F.A.R. Landing Runway Length Requirements - Flaps 30: Model 737-400

NOTES:
* $\text{V}_{\text{APP}} = 1.3V_{S}$
* ZERO WIND, ZERO RUNWAY GRADE
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN
3.4.15 F.A.R. Landing Runway Length Requirements - Flaps 15:
Model 737-400

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
3.4.16 F.A.R. Landing Runway Length Requirements - Flaps 40: Model 737-500

NOTES:
* \( V_{APP} = 1.3 V_{S} \)
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

F.A.R. LANDING RUNWAY LENGTH

1,000 POUNDS

1,000 METERS

WET RUNWAY

DRI Runway

MAX DESIGN LANDING WEIGHT
110,000 LB (49,900 KG)

AIRPORT ELEVATION FEET
5,000
3,438

4,000
1,219

SEA LEVEL

WET RUNWAY

DRI Runway

OPEERATIONAL LANDING WEIGHT

1,000 KILOGRAMS
3.4.17 F.A.R. Landing Runway Length Requirements - Flaps 30: Model 737-500

NOTES:
* $\frac{V_{APP}}{V_S} = 1.3$  
* ZERO WIND, ZERO RUNWAY GRADIENT  
* FLAP POSITION 30  
* AUTOMATIC SPEED BRAKES  
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN
3.4.18 F.A.R. Landing Runway Length Requirements - Flaps 15: Model 737-500

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

FLAPS 15

MAX DESIGN LANDING WEIGHT
110,000 LB (49,800 KG)

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

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

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

WET RUNWAY
DRY RUNWAY

OPEPRATIONAL LANDING WEIGHT
1,000 KILOGRAMS
1,000 POUNDS

70 75 80 85 90 95 100 105 110 115 120

70 75 80 85 90 95 100 105 110 115 120

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3.4.19  F.A.R. Landing Runway Length Requirements - Flaps 30:
Model 737-600

DO NOT USE FOR DISPATCH

Landing Field Length
737-600 (CFM56-7B Series)

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

![Graph showing landing field length requirements for Flaps 30 on Model 737-600. The graph represents the relationship between pressure altitude, landing field length, and operational landing weight. The legend indicates different runway conditions: wet and dry.](image-url)
3.4.20  F.A.R. Landing Runway Length Requirements - Flaps 30: Model 737-700ER

DO NOT USE FOR DISPATCH

Landing Field Length
737-700/-700W/-700ER/-700ERW/-700C/-700CW/BJJ1 (CFM56-7B Series)

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

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<tr>
<td>8,000 (2,438)</td>
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<tr>
<td>6,000 (1,829)</td>
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</tr>
<tr>
<td>4,000 (1,219)</td>
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<tr>
<td>2,000 (610)</td>
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LEGEND
- WET RUNWAY
- DRY RUNWAY
3.4.21 F.A.R. Landing Runway Length Requirements - Flaps 30:
Model 737-800

DO NOT USE FOR DISPATCH

Landing Field Length
737-800/-800W/BBJ2 (CFM56-7B Series)

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

LEGEND

WET RUNWAY
DRY RUNWAY

FLAPS 30

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

LANDING FIELD LENGTH
(1,000 METERS)

10
9
8
7
6
5
4
3
1.0
2.0
1.5
2.5
3.0

MAX LANDING WT
146,300 LB (66,351 KG)

1,000 FEET

90
100
110
120
130
140
150
160

1,000 POUNDS

45
50
55
60
65
70

(1,000 KILOGRAMS)
OPERATIONAL LANDING WEIGHT
3.4.22 F.A.R. Landing Runway Length Requirements - Flaps 30: Model 737-900

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

![Diagram of Landing Field Length Requirements](image)

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<td>2,000 (610)</td>
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<tr>
<td>SEA LEVEL</td>
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**FLAPS 30**

**MAX LANDING WT:**
- 146,300 LBS (66,361 KG)

**WET RUNWAY**

**DRY RUNWAY**

**LEGEND**

- **DO NOT USE FOR DISPATCH**

Landing Field Length
737-900/900W (CFM56-7B Series)
3.4.23 F.A.R. Landing Runway Length Requirements - Flaps 30: Model 737-900ER

DO NOT USE FOR DISPATCH

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

![Graph showing F.A.R. Landing Runway Length Requirements for Flaps 30: Model 737-900ER.](image-url)
4.0 AIRPLANE PERFORMANCE

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.
4.2 TURNING RADII

4.2.1 Turning Radii – No Slip Angle: Model 737-100

<table>
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<th>R1 INNER GEAR</th>
<th>R2 OUTER GEAR</th>
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<th>R4 WINGTIP</th>
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NOTES: * ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE
4.2.2 Turning Radii – 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 Radii – 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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4.2.4  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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### 4.2.5 Turning Radii – No Slip Angle: Model 737-400

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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.6 Turning Radii – No Slip Angle: Model 737-500

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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.7 Turning Radii – No Slip Angle: Model 737-600

**NOTES:**
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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### 4.2.8 Turning Radii – No Slip Angle: Model 737-600 With Winglets

![Diagram showing turning radii and steering angle]

#### 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 737-700

**NOTES:**
* 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 737-700 With Winglets, 737 BBJ

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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.11 Turning Radii – No Slip Angle: Model 737-800

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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.12 Turning Radii – No Slip Angle: Model 737-800 With Winglets, 737 BBJ2

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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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**4.2.13 Turning Radii – No Slip Angle: Model 737-900, -900ER**

**NOTES:**
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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NOTES: * ACTUAL OPERATING TURNING RADIi MAY BE GREATER THAN SHOWN
    * CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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<td>45</td>
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</tr>
<tr>
<td>60</td>
<td>21.0</td>
<td>6.4</td>
<td>44.1</td>
<td>13.4</td>
<td>66.0</td>
<td>20.1</td>
</tr>
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<td>65</td>
<td>14.7</td>
<td>4.5</td>
<td>37.8</td>
<td>11.5</td>
<td>63.1</td>
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<td>70</td>
<td>8.9</td>
<td>2.7</td>
<td>32.0</td>
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<tr>
<td>78 (MAX)</td>
<td>0.4</td>
<td>0.1</td>
<td>23.5</td>
<td>7.2</td>
<td>58.5</td>
<td>17.8</td>
</tr>
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</table>

D6-58325-6
REV A
September 2020
4-15
4.3 CLEARANCE RADII

4.3.1 Minimum Turning Radii – 3” Slip Angle: Model 737-100, -200

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</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>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>75</td>
<td>34.3</td>
<td>10.5</td>
<td>9.2</td>
<td>2.8</td>
<td>56.1</td>
<td>17.1</td>
<td>36.5</td>
</tr>
<tr>
<td>737-200</td>
<td>75</td>
<td>41.3</td>
<td>11.4</td>
<td>10.0</td>
<td>3.0</td>
<td>60.0</td>
<td>18.3</td>
<td>39.6</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 THROTTLE ON ALL ENGINES. NO DIFFERENTIAL BRAKING.
4.3.2 Minimum Turning Radii – 3" Slip Angle: Model 737-300, -300 With Winglets, -400, -500

**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

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>EFFECTIVE TURNING ANGLE (Deg)</th>
<th>X (FT)</th>
<th>Y (FT)</th>
<th>A (FT)</th>
<th>R3 (FT)</th>
<th>R4 (FT)</th>
<th>R5 (FT)</th>
<th>R6 (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-300</td>
<td>75</td>
<td>40.8</td>
<td>12.4</td>
<td>10.9</td>
<td>3.3</td>
<td>64.6</td>
<td>19.7</td>
<td>43.2</td>
</tr>
<tr>
<td>737-300 WITH WINGLETS</td>
<td>75</td>
<td>40.8</td>
<td>12.4</td>
<td>10.9</td>
<td>3.3</td>
<td>64.6</td>
<td>19.7</td>
<td>43.2</td>
</tr>
<tr>
<td>737-400</td>
<td>75</td>
<td>46.8</td>
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<td>72.4</td>
<td>22.1</td>
<td>49.4</td>
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<tr>
<td>737-500</td>
<td>75</td>
<td>36.3</td>
<td>11.1</td>
<td>9.7</td>
<td>3.0</td>
<td>58.7</td>
<td>17.9</td>
<td>38.5</td>
</tr>
</tbody>
</table>

**THEORETICAL CENTER OF TURN FOR MINIMUM TURNING RADIUS.**
SLOW CONTINUOUS TURNING AT MINIMUM THRUST ON ALL ENGINES.
NO DIFFERENTIAL BRAKING.
4.3.3 Minimum Turning Radii – 3" Slip Angle: Model 737-600, -700, -800, -900, -900ER

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</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>
</tr>
</thead>
<tbody>
<tr>
<td>737-600</td>
<td>75</td>
<td>36.8</td>
<td>11.2</td>
<td>9.9</td>
<td>3.0</td>
<td>60.8</td>
<td>18.5</td>
<td>39.6</td>
</tr>
<tr>
<td>737-700</td>
<td>75</td>
<td>41.3</td>
<td>12.6</td>
<td>11.1</td>
<td>3.4</td>
<td>66.9</td>
<td>20.4</td>
<td>44.3</td>
</tr>
<tr>
<td>737-800</td>
<td>75</td>
<td>51.2</td>
<td>15.6</td>
<td>13.7</td>
<td>4.2</td>
<td>79.7</td>
<td>24.3</td>
<td>54.5</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>86.4</td>
<td>26.3</td>
<td>59.8</td>
</tr>
</tbody>
</table>
4.3.4 Minimum Turning Radii – 3” Slip Angle: Model 737-600, -700, -800, -900, -900ER With Winglets, 737 BBJ, 737 BBJ2

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

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</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>
</tr>
</thead>
<tbody>
<tr>
<td>737-600</td>
<td>75</td>
<td>36.8</td>
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<td>9.9</td>
<td>3.0</td>
<td>60.8</td>
<td>18.5</td>
<td>39.6</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>66.9</td>
<td>20.4</td>
<td>44.3</td>
</tr>
<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>79.7</td>
<td>24.3</td>
<td>54.5</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>86.4</td>
<td>26.3</td>
<td>59.8</td>
</tr>
</tbody>
</table>
4.4 VISIBILITY FROM COCKPIT IN STATIC POSITION: MODEL 737, ALL MODELS

NOT TO BE USED FOR LANDING APPROACH VISIBILITY

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

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

PILOT'S EYE
POSITION

VISUAL ANGLES IN HORIZONTAL PLANE THROUGH PILOT'S EYE POSITION

1 FT 8 IN (0.51 M)

PILOT'S EYE
POSITION

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

IN EXCESS OF 90°

28°
74°
65°
39°
46°
24°
33°
41°
4.5 RUNWAY AND TAXIWAY TURN PATHS

4.5.1 Runway and Taxiway Turn Paths - Runway-to-Taxiway, More Than 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.

- APPROX 6.4 FT (2.0 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)
- 737-100
- 737-900
- 100 FT (30 M)

(1) MAIN GEAR TIRED 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.

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

737-100
737-900
100 FT (30 M)

APPROX PATH OF OUTSIDE EDGE OF MAIN GEAR TIRES (737-100) (1)
APPROX PATH OF OUTSIDE EDGE OF MAIN GEAR TIRES (737-900) (1)
75 FT (23 M) R
100 FT (30 M)
MODIFIED FILLET AS REQUIRED
APPROX 4 FT (1.3 M)
4.5.3 Runway and Taxiway Turn Paths - Taxiway-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.

APPROX 2 FT (0.6 M)
APPROX PATH OF OUTSIDE EDGE OF MAIN GEAR TIRES (737-100) (1)

75 FT (23 M) R
100 FT (30 M) R
MODIFIED FILLET AS REQUIRED

APPROX PATH OF OUTSIDE EDGE OF MAIN GEAR TIRES (737-900) (1)

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

50 FT (15 M)
NOSE GEAR TRACKS CENTERLINE OF TURNS
4.5.4 Runway and Taxiway Turn Paths - Taxiway-to-Taxiway, 90 Degrees, Cockpit 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.

(1) MAIN GEAR TIRE TRACKS FOR THE OTHER AIRPLANE MODELS WILL BE BETWEEN THE 737-100 AND 737-900 TRACKS.
4.6 RUNWAY HOLDING BAY: MODEL 737, ALL MODELS

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.
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 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

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 737-400
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
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
5.2 TERMINAL OPERATIONS - TURNAROUND STATION

5.2.1 Terminal Operations - Turnaround Station: Model 737-100, -200

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Estimated Time (Minutes after docked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lower Airstairs</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Provide Ground Support Equipment</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Deplane Passengers</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Unload Baggage</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Unload Cargo</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Service Airplane</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Service Waste Tanks</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Service Potable Water</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Service Galley</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>Service Cabin</td>
<td>15</td>
</tr>
<tr>
<td>11</td>
<td>Perform Maintenance Checks</td>
<td>15</td>
</tr>
<tr>
<td>12</td>
<td>Load Cargo</td>
<td>15</td>
</tr>
<tr>
<td>13</td>
<td>Load Baggage</td>
<td>15</td>
</tr>
<tr>
<td>14</td>
<td>Enplane Passengers</td>
<td>15</td>
</tr>
<tr>
<td>15</td>
<td>Start Engines</td>
<td>15</td>
</tr>
<tr>
<td>16</td>
<td>Clear Airplane for Departure</td>
<td>15</td>
</tr>
</tbody>
</table>

NOTES:
1. Estimates based on mixed-class configuration, 65% load factor
2. It is assumed that all equipment functions 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.
5.2.2 Terminal Operations - Turnaround Station – Passenger/Cargo: Model 737-200C

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 PALLETS 1
12. UNLOAD PALLETS 2
13. LOAD LOWER LOBE COMPARTMENTS
14. LOAD PALLETS 2
15. LOAD PALLETS 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 PALLETS 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.
5.2.3 Terminal Operations - Turnaround Station – All Cargo: Model 737-200C

<table>
<thead>
<tr>
<th>1. Position Mobile Stairs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Position Cargo Loader</td>
<td></td>
</tr>
<tr>
<td>3. Unload Lower Lobe Compartments</td>
<td></td>
</tr>
<tr>
<td>4. Fuel Airplane</td>
<td></td>
</tr>
<tr>
<td>5. Open Cargo Door</td>
<td></td>
</tr>
<tr>
<td>6. Unload Pallets</td>
<td></td>
</tr>
<tr>
<td>7. Load Lower Lobe Compartments</td>
<td></td>
</tr>
<tr>
<td>8. Load Pallets</td>
<td></td>
</tr>
<tr>
<td>9. Remove Cargo Loader</td>
<td></td>
</tr>
<tr>
<td>10. Close Cargo Door</td>
<td></td>
</tr>
<tr>
<td>11. Remove Mobile Stairs</td>
<td></td>
</tr>
<tr>
<td>12. Start Engines</td>
<td></td>
</tr>
</tbody>
</table>

Estimated Time (Minutes After Parked)

0 5 10 15 20 25 30 35 40

Notes:
1. It is assumed that all equipment functions 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

1. POSITION MOBILE STAIRS
2. POSITION CARGO LOADER
3. UNLOAD LOWER LORE COMPARTMENTS
4. FUEL AIRPLANE
5. OPEN CARGO DOOR
6. UNLOAD PALLETS
7. LOAD LOWER LORE COMPARTMENTS
8. LOAD PALLETS
9. REMOVE CARGO LOADER
10. CLOSE CARGO DOOR
11. REMOVE MOBILE STAIRS
12. START ENGINES

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 AIRPLANES PRIOR TO RAMP PLANNING.
### 5.2.5 Terminal Operations – Turnaround Station: Model 737-600

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passenger Services</strong></td>
<td></td>
</tr>
<tr>
<td>Position Passenger Bridge</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</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>5.0</td>
</tr>
<tr>
<td>Load AFT compartment</td>
<td>7.0</td>
</tr>
<tr>
<td><strong>Airplane Servicing</strong></td>
<td></td>
</tr>
<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
- 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 cart 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>步骤</th>
<th>时间（分钟）</th>
</tr>
</thead>
<tbody>
<tr>
<td>乘客服务</td>
<td></td>
</tr>
<tr>
<td>将乘客桥或楼梯定位</td>
<td>1.0</td>
</tr>
<tr>
<td>下机乘客</td>
<td>8.0</td>
</tr>
<tr>
<td>服务厨房</td>
<td>15.0</td>
</tr>
<tr>
<td>服务客舱</td>
<td>10.0</td>
</tr>
<tr>
<td>上机乘客</td>
<td>12.0</td>
</tr>
<tr>
<td>移除乘客桥或楼梯</td>
<td>1.0</td>
</tr>
<tr>
<td>货物/行李 handling</td>
<td></td>
</tr>
<tr>
<td>卸前舱</td>
<td>4.0</td>
</tr>
<tr>
<td>装前舱</td>
<td>6.0</td>
</tr>
<tr>
<td>卸后舱</td>
<td>6.0</td>
</tr>
<tr>
<td>装后舱</td>
<td>8.0</td>
</tr>
<tr>
<td>飞机加油</td>
<td>9.0</td>
</tr>
<tr>
<td>服务厕所</td>
<td>10.0</td>
</tr>
<tr>
<td>服务便携式水</td>
<td>2.0</td>
</tr>
<tr>
<td>启动发动机/推油门</td>
<td>----</td>
</tr>
</tbody>
</table>

**注释：**
- 100% 乘客和货物的交换
- 140 乘客通过前舱门下机
- 燃油 - 2,700 加仑, 300 GPH
- 1 口径喷嘴, 50 磅
- 1,000 加仑燃油储备
- 乘客装载率:
  - 卸载: 18 乘客/分钟
  - 装载: 12 乘客/分钟
- 行李装载率:
  - 卸载: 15.0 行李/分钟
  - 装载: 10.0 行李/分钟
- 1.0 行李/乘客 (3.0 立方英尺)
- 前舱/后舱 57 个行李, 83% 堆叠效率
- 1 个厨房车
- 100% 负荷因子

**注意:** 此数据用于说明终端操作的一般范围和类型。不同的航空公司和运营环境将有不同的序列和时间间隔来完成所示任务。
### 5.2.7 Terminal Operations – Turnaround Station: Model 737-800, 900 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>9.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>15.0</td>
</tr>
<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>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AIRCRAFT SERVICING</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacant 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 PSI
  - 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 Baggage 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.
### 5.2.8 Terminal Operations – Turnaround Station: Model 737-900, -900ER

<table>
<thead>
<tr>
<th>Position/Remove Equipment</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>10.0</td>
</tr>
<tr>
<td>Service Galley/Lavatories</td>
<td>15.0</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>11.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>15.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Unload FWD Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>8.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>10.0</td>
</tr>
<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:**
- 100% EXCHANGE OF PASSENGERS AND CARGO
- 177 PASSENGERS BOARD AND DEPLAN VIA FWD LH ENTRY DOOR
- FUEL = 2,700 GALLONS AT 300 GPM
  1 NOZZLE AT 50 FPSG
  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/97 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.
5.2.9  Terminal Operations – Turnaround Station: Model 737 BBJ, BBJ2

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.
5.3 TERMINAL OPERATIONS - EN ROUTE STATION

5.3.1 Terminal Operations - En Route Station: Model 737-100, -200, -300, -400, -500

<table>
<thead>
<tr>
<th>Task</th>
<th>Estimated Time (Minutes after parked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LOWER AIRSTAIRS</td>
<td></td>
</tr>
<tr>
<td>2. PROVIDE GROUND SUPPORT EQUIPMENT</td>
<td></td>
</tr>
<tr>
<td>3. DEPLAN PASSENGERS</td>
<td></td>
</tr>
<tr>
<td>4. UNLOAD BAGGAGE</td>
<td></td>
</tr>
<tr>
<td>5. UNLOAD CARGO</td>
<td></td>
</tr>
<tr>
<td>6. FUEL AIRPLANE</td>
<td></td>
</tr>
<tr>
<td>7. SERVICE WASTE TANKS</td>
<td></td>
</tr>
<tr>
<td>8. SERVICE POTABLE WATER</td>
<td></td>
</tr>
<tr>
<td>9. SERVICE GALLEY</td>
<td></td>
</tr>
<tr>
<td>10. SERVICE CABIN</td>
<td></td>
</tr>
<tr>
<td>11. PERFORM MAINTENANCE CHECKS</td>
<td></td>
</tr>
<tr>
<td>12. LOAD CARGO</td>
<td></td>
</tr>
<tr>
<td>13. LOAD BAGGAGE</td>
<td></td>
</tr>
<tr>
<td>14. ENPLAN PASSENGERS</td>
<td></td>
</tr>
<tr>
<td>15. START ENGINES</td>
<td></td>
</tr>
<tr>
<td>16. 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.
### 5.3.2 Terminal Operations - En Route Station: Model 737-600

<table>
<thead>
<tr>
<th>Time Events</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 Galley</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>
<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>
<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>

**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
  - 83% Stacking Efficiency
- Baggage Loading Rates:
  - Unloading - 15.0 Bags per minute
  - Loading - 10.0 Bags per minute

1.0 Bags per Pax (4.5 cu ft)
23 Bags FWD/42 Bags AFT

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>Service Type</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passenger Services</strong></td>
<td></td>
</tr>
<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 Galleys</td>
<td>---</td>
</tr>
<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>
<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>Airplane Servicing</strong></td>
<td></td>
</tr>
<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 (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/30 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.
### Terminal Operations - En Route Station: Model 737-800, 800

#### 5.3.4 With Winglets

<table>
<thead>
<tr>
<th>Service</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passenger Services</strong></td>
<td></td>
</tr>
<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>
</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>Airplane Servicing</strong></td>
<td></td>
</tr>
<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 (160 Passengers)
- 86 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

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

#### Passenger Services

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Min)</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>---</td>
</tr>
<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>

#### Cargo/Baggage Handling

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload Fwd Compartment</td>
<td>3.0</td>
</tr>
<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>

#### Airplane Servicing

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Min)</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

- 0
- 5
- 10
- 15
- 20
- 25
- 30

**Notes:**

- POSITION/REMOVE EQUIPMENT
- 100% Load Factor (177 Passengers)
- 108 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/58 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.
5.3.6 Terminal Operations - En Route Station: Model 737 BBJ, BBJ2

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
5.4 GROUND SERVICING CONNECTIONS

5.4.1 Ground Service Connections: Model 737-100
5.4.2 Ground Service Connections: Model 737-200

OVERWING FUELING

PRESSURE FUEL

JACK POINT

PNEUMATIC

ELECTRICAL

TOILET

AIR CONDITIONING

POTABLE WATER

(OPTIONAL LOCATION)

JACK POINT

TOILET

POTABLE WATER

OVERWING FUELING

PRESSURE FUEL

(RIGHT WING)

ELECTRICAL

TOILET

AIR CONDITIONING

PNEUMATIC

JACK POINT

OVERWING FUELING (2)

JACK POINT

TOILET

POTABLE WATER
5.4.3 Ground Service Connections: Model 737-300
5.4.4 Ground Service Connections: Model 737-400
5.4.5 Ground Service Connections: Model 737-500
5.4.6 Ground Service Connections: Model 737-600
5.4.7 Ground Service Connections: Model 737-700
5.4.8 Ground Service Connections: Model 737-700 With Winglets, 737 BBJ
5.4.9 Ground Service Connections: Model 737-800
5.4.10 Ground Service Connections: Model 737-800 With Winglets, 737 BBJ2
5.4.11 Ground Service Connections: Model 737-900, -900ER
5.4.12 Ground Service Connections: Model 737-900, -900ER With Winglets
### 5.4.13 Ground Servicing Connections and Capacities: Model 737, All Models

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>MODEL</th>
<th>DISTANCE AFT OF</th>
<th>DISTANCE FROM AIRPLANE CENTERLINE</th>
<th>MAX HEIGHT ABOVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FT-IN</td>
<td>M</td>
<td>FT-IN</td>
</tr>
<tr>
<td>CONDITIONED AIR ONE 8-IN (20.3 CM) PORT</td>
<td>737-100</td>
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<td>FUEL ONE UNDERWING PRESSURE CONNECTOR ON RIGHT WING (SEE SEC 2.1 FOR CAPACITY)</td>
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5.4.14 Ground Servicing Connections and Capacities: Model 737, All Models

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<tr>
<th>SYSTEM</th>
<th>MODEL</th>
<th>DISTANCE AFT OF NOSE FT-IN M</th>
<th>DISTANCE FROM AIRPLANE CENTERLINE FT-IN M</th>
<th>MAX HEIGHT ABOVE GROUND FT-IN M</th>
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<td>3 - 10 1.2</td>
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<td>ONE PRESSURE CONNECTION FOR DRAINING,</td>
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<td>11 – 8 3.6</td>
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<td>FLUSHING, AND CHEMICAL FILLING – 17 GAL</td>
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<td>(64.3 L) CAPACITY 10-GPM (37.9 LPM) 20-PSIG (1.4 KG/SQ CM) SERVICE REQUIRED</td>
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<td>94 - 9 28.9</td>
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<td>737-100</td>
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<td>5 - 0 1.5</td>
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<td>ONE SERVICE CONNECTION FOR OXYGEN FILL –</td>
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<td>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>
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<td>OXYGEN</td>
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<td>INDIVIDUAL CANISTERS IN EACH PASSENGER</td>
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<td>SERVICE UNIT</td>
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<td>34 – 2 10.4</td>
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<td>3 - 0 0.9</td>
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<td>ONE 3-IN (7.6-CM) PORT FOR ENGINE START AND AIRCONDITIONING PACKS</td>
<td>737-200</td>
<td>37 – 3 11.3</td>
<td>-</td>
<td>3 - 0 0.9</td>
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## 5.4.15 Ground Servicing Connections and Capacities: Model 737, All Models

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<tr>
<th>SYSTEM</th>
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<th>MAX HEIGHT ABOVE GROUND</th>
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<td>FT-IN    M</td>
<td>FT-IN    M</td>
<td>FT- IN  M</td>
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<td>TWO SERVICE CONNECTIONS</td>
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<td>0.75-IN (1.9 CM) AFT LOCATION OPTIONAL</td>
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<td>78 - 6   23.9</td>
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<td>0.75-IN (1.9 CM)</td>
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<td>108 - 1  33.9</td>
<td>-        -</td>
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</table>

**NOTES:**
- DISTANCES ROUNDED TO THE NEAREST INCH AND 0.1 METER.
- AIRPLANE MODEL DESIGNATIONS ALSO INCLUDE ALL DERIVATIVES.
5.5 ENGINE STARTING PNEUMATIC REQUIREMENTS

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 = 59°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 KG/MIN)

![Graph showing engine starting pneumatic requirements](image-url)
5.5.2 Engine Start Pneumatic Requirements - Sea Level: Model 737-300, -400, -500

NOTES:
- CFM56-3 ENGINES
- MINIMUM STARTING REQUIREMENTS
- SEA LEVEL
- COORDINATE WITH USING AIRLINE
- FOR SPECIFIC PLANNED OPERATING PROCEDURES

EXAMPLE:
- AMBIENT TEMPERATURE = 59°F (15°C)
- GROUND CONNECTION TEMPERATURE = 200°F (93°C)
- REQUIRED PRESSURE AT GROUND CONNECTION = 52.5 PSIA (3.69 KG/SQ CM ABS)
- REQUIRED AIRFLOW AT GROUND CONNECTION = 120 LB/MIN 54.4 KG/MIN

---

**Graph 1:**
- Maximum Pressure
- Airflow at Ground Connector (LB/Min)
- PSIA

**Graph 2:**
- Pressure at Ground Connector (KG/SQ CM A)
- PSIA
- Degrees Fahrenheit

---

REV A  
September 2020  
D6-58325-6  
5-45
5.5.3 Engine Start Pneumatic Requirements - Sea Level: Model
737-600, -700, -800, -900, 737 BBJ, 737 BBJ2

NOTES:
- MINIMUM STARTING REQUIREMENTS
- SEA LEVEL
- COORDINATE WITH USING AIRLINES FOR SPECIFIC
  PLANNED OPERATING PROCEDURES

AIR TEMP
AT GROUND
CONNECTOR

0°F (−18°C)
100°F (38°C)
200°F (93°C)
300°F (149°C)
400°F (204°C)
450°F (232°C)

MAXIMUM PRESSURE

AIRFLOW AT GROUND CONNECTOR
(KG/ Min)

PSIA

30 35 40 45 50 55 60 65 70

2.5 3.0 3.5 4.0 4.5 5.0

(KG/SQ CM A)

PRESSURE AT GROUND CONNECTOR

45 50 55 60 65 70

3.0 3.5 4.0 4.5 5.0

PSIA

-40 -30 -20 0 10 20 30 40 50

(DEGREES CELSIUS)

AMBIENT AIR TEMPERATURE

-40 -30 -20 -10 0 10 20 30 40 50

(DEGREES FAHRENHEIT)
5.6 GROUND PNEUMATIC POWER REQUIREMENTS

5.6.1 Ground Pneumatic Power Requirements - Heating/Cooling: Model 737-100, -200

Heating (Pull-Up)
- Initial Cabin Temperature: 0°F (-17.9°C)
- No Galley Load
- No Electrical Load
- W Cart = 1.23 kW
- P = Pressure at Ground Connection
- Temp at Ground Connection = 200°F (93°C) to 450°F (232°C)

Cooling (Pull-Down)
- Initial Cabin Temperature: 100°F (38.3°C)
- Outside Air Temperature: 10°F (−12°C)
- Solar Load: 4,800 Btu/hr (1,210 kcal/hr)
- No Galley Load
- Temperature at Ground Connection Less Than 450°F (232°C)
- W Cart = 1.23 kW
- P = Pressure at Ground Connection, psig
- No Electrical Load
- RH = Relative Humidity
5.6.2 Ground Pneumatic Power Requirements - Heating/Cooling: Model 737-300, -500

**HEATING (FULL-UP)**
- INITIAL CABIN TEMPERATURE = 0°F (-18°C)
- NO GALLEY LOAD
- NO ELECTRICAL LOAD
- \( W_{\text{cart}} = 1.23 \times W \)
- \( P = \) PRESSURE AT GROUND CONNECTION
- TEMP AT GROUND CONNECTION 200°F (66°C) TO 450°F (232°C)

**COOLING (FULLDOWN)**
- 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

---

**Graphs:**
- Heat and Cool airflow vs. Time to Heat or Cool the Cabin to 70°F (21°C) and 80°F (27°C) respectively.
5.6.3 Ground Pneumatic Power Requirements - Heating/Cooling: Model 737-400

**Heating (Full-Up)**
- Initial cabin temperature: 0°F (-17.8°C)
- Outside air temperature: 0°F (-17.8°C)
- No galley load, no electrical load
- \( P_{\text{CART}} = 1.14 \text{ PSIG} \)
- \( P = \text{Pressure at ground connection, PSIG} \)
- Temp at ground connection = 200°F (93°C) to 450°F (232°C)

**Cooling (Full-Down)**
- Initial cabin temperature: 103°F (39.5°C)
- Outside air temperature: 103°F (39.5°C)
- Solar load: 7,741 Btu/hr (1,851 Kcal/hr)
- No galley load, no electrical load
- Temperature at ground connection less than 450°F (232°C)
- \( W = 1.17 \text{ kW} \)
- \( P = \text{Pressure at ground connection, PSIG} \)
5.6.4 Ground Pneumatic Power Requirements - Heating/Cooling: Model 737-600, -700

**Heating (Full-Up)**
- Initial Cabin Temperature - 0°F (-18°C)
- No Galley Load
- No Electrical Load
- \( W_{\text{cart}} = 1.23 \times W \)
- \( P = \) Pressure at Ground Connection
- Temp at Ground Connection 200°F (66°C) to 450°F (232°C)

**Cooling (Full-Down)**
- 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 (252°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

HEATING (PULL-UP)
- INITIAL CABIN TEMPERATURE - 0°F (-18°C)
- OUTSIDE AIR TEMPERATURE - 0°F (-18°C)
- NO GALLEY LOAD, NO ELECTRICAL LOAD
- \( W_{caft} = 1.14 \times W \)
- \( P = \text{PRESSURE AT GROUND CONNECTION} \)
- TEMP AT GROUND CONNECTION - 200°F (65°C) TO 450°F (232°C)

COOLING (PULL-DOWN)
- INITIAL CABIN TEMPERATURE - 103°F (39°C)
- OUTSIDE AIR TEMPERATURE - 103°F (39°C)
- SOLAR LOAD = 7,741 BTU/HR (1,951 KCal/HR)
- NO GALLEY LOAD, NO ELECTRICAL LOAD
- \( W_{caft} = 11.7 \times W \)
- \( P = \text{PRESSURE AT GROUND CONNECTION, PSIG} \)
- TEMP AT GROUND CONNECTION - LESS THAN 450°F (232°C)
5.7 CONDITIONED AIR REQUIREMENTS

5.7.1 Conditioned Air Flow Requirements: Model 737-100, -200

**CONDITIONING:**
1. **CABIN AT 75°F (24°C);** 90 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 80°F (27°C);** 65 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 5,570 BTU/HR; ELECTRICAL LOAD 6,340 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);** 65 PASSENGERS AND CREW; NO GALLEY LOAD; NO SOLAR LOAD; ELECTRICAL LOAD 6,450 BTU/HR; PRECONDITIONED AIRPLANE.

ΔP = GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.
1 BTU/HR = 0.252 KG-CAL/HR.

![Diagram showing airflow requirements](image)

**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 = 150 LB/MIN (72 KG/MIN TO AVOID OPENING OF THE DISTRIBUTION RELIEF VALVE.
5.7.2 Conditioned Air Flow Requirements: Model 737-300, -500

**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 IN 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.

ΔP_s = GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.
1 BTU/HR = 0.252 KG-CAL/HR
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; pre-conditioned 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; pre-conditioned airplane.

$\Delta P_s = \text{gage static pressure in inches of water at ground connection.}$

1 BTU/HR = 0.252 kg-cal/HR

---

![Diagram showing airflow and pressure changes with temperature and conditions]
5.7.4 Conditioned Air Flow Requirements: Model 737-600, -700

COOLING:
1. CABIN AT 72° F (22° 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 IN 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.

\( \Delta P_s \) = GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.
5.7.5 Conditioned Air Flow Requirements: Model 737-800, -900

**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.

**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 GROUND TOWING REQUIREMENTS

5.8.1 Ground Towing Requirements - English Units: Model 737, All Models

NOTES:
- UNUSUAL BREAKAWAY CONDITIONS NOT REFLECTED
- ESTIMATED FOR RUBBER-TIRED TOW VEHICLES
- COEFFICIENT OF FRICTION ($\mu$) APPROXIMATE

![Diagram showing ground towing requirements for Model 737, All Models. The diagram illustrates drawbar pull in 1,000 pounds against total traction wheel load, number of engines backing against idle thrust, and percent slope. The diagram includes lines for different friction conditions such as dry concrete or asphalt, wet asphalt, wet concrete, hard snow with chains, and hard snow. The shaded area indicates the safe operating range for two engines idling.]
5.8.2 Ground Towing Requirements - Metric Units: Model 737, All Models

NOTES:
- UNUSUAL BREAKAWAY CONDITIONS NOT REFLECTED
- ESTIMATED FOR RUBBER-TIRED TOW VEHICLES
- COEFFICIENT OF FRICTION (µ) APPROXIMATE
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 – Idle Thrust: Model 737-100, -200
6.1.2 Predicted Jet Engine Exhaust Velocity Contours – Idle Thrust: Model 737-300, -400, -500
6.1.3 Predicted Jet Engine Exhaust Velocity Contours – Idle Thrust: Model 737-600, -700, -800, -900, All Models
6.1.4 Predicted Jet Engine Exhaust Velocity Contours - Breakaway Thrust: Model 737-100, -200
6.1.5 Predicted Jet Engine Exhaust Velocity Contours - Breakaway Thrust: Model 737-300, -400, -500
6.1.6  Predicted Jet Engine Exhaust Velocity Contours - Breakaway
Thrust: Model 737-600, -700, -800, -900 All Models
6.1.7 Predicted Jet Engine Exhaust Velocity Contours - Takeoff Thrust: Model 737-100, -200
6.1.8 Predicted Jet Engine Exhaust Velocity Contours - Takeoff Thrust: Model 737-300, -400, -500
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
6.1.11 Predicted Jet Engine Exhaust Temperature Contours - Idle Thrust: Model 737-300, -400, -500
6.1.12 Predicted Jet Engine Exhaust Temperature Contours - Idle Thrust: Model 737-600, -700, -800, -900 All Models
6.1.13 Predicted Jet Engine Exhaust Temperature Contours – Breakaway Thrust: Model 737-100, 200
6.1.14 Predicted Jet Engine Exhaust Temperature Contours – Breakaway 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.
6.1.15 Predicted Jet Engine Exhaust Temperature Contours – Breakaway Thrust: Model 737-600, -700, -800, -900 All Models
6.1.16 Predicted Jet Engine Exhaust Temperature Contours – Takeoff Thrust: Model 737-100, -200
6.1.17 Predicted Jet Engine Exhaust Temperature Contours – Takeoff Thrust: Model 737-300, -400, -500
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

737-600
737-700
737-800
737-900
100°F (38°C)

15 FT 9 IN (4.82 M)
12 FT 8 IN (3.87 M)
3 FT 7 IN (1.10 M)

100°F
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, enroute 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 (15 °C)</td>
</tr>
<tr>
<td>59 °F (15 °C)</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

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

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:

5. 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.

6. Values of the subgrade modulus (\( k \)) are then plotted.

7. 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:

8. 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.

9. Values of the subgrade modulus (\( k \)) are then plotted.

10. Additional load lines for the incremental values of weight are then drawn on the basis of the subgrade modulus curves already established.

11. 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</th>
<th>PAVEMENT TYPE</th>
<th>SUBGRADE CATEGORY</th>
<th>TIRE PRESSURE CATEGORY</th>
<th>EVALUATION METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Rigid</td>
<td>A = High</td>
<td>W = No Limit</td>
<td>T = Technical</td>
</tr>
<tr>
<td>F</td>
<td>Flexible</td>
<td>B = Medium</td>
<td>X = To 254 psi (1.75 MPa)</td>
<td>U = Using Aircraft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C = Low</td>
<td>Y = To 181 psi (1.25 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, \( k = 550 \text{ pci (150 MN/m}^3\)\)
- **Code B** - Medium Strength, \( k = 300 \text{ pci (80 MN/m}^3\)\)
- **Code C** - Low Strength, \( k = 150 \text{ pci (40 MN/m}^3\)\)
- **Code D** - Ultra Low Strength, \( k = 75 \text{ pci (20 MN/m}^3\)\)
7.2 LANDING GEAR FOOTPRINT

7.2.1 Landing Gear Footprint: Model 737-100

<table>
<thead>
<tr>
<th>UNITS</th>
<th>MODEL 737-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM DESIGN TAXI WEIGHT</td>
<td>LB  97,800</td>
</tr>
<tr>
<td></td>
<td>KG  44,361</td>
</tr>
<tr>
<td>PERCENT OF WEIGHT ON MAIN GEAR</td>
<td>SEE SECTION 7.4</td>
</tr>
<tr>
<td>NOSE GEAR TIRE SIZE</td>
<td>IN 24 x 7.7 – 10 14 PR</td>
</tr>
<tr>
<td>NOSE GEAR TIRE PRESSURE</td>
<td>PSI 135</td>
</tr>
<tr>
<td></td>
<td>KG/CM² 9.49</td>
</tr>
<tr>
<td>MAIN GEAR TIRE SIZE</td>
<td>IN 40 x 14 – 16 22 PR</td>
</tr>
<tr>
<td>MAIN GEAR TIRE PRESSURE</td>
<td>PSI 138</td>
</tr>
<tr>
<td></td>
<td>KG/CM² 9.70</td>
</tr>
</tbody>
</table>
7.2.2 Landing Gear Footprint: Model 737-200

<table>
<thead>
<tr>
<th>UNITS</th>
<th>MODEL 737-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM DESIGN TAXI WEIGHT</td>
<td>LB 100,800 104,000 110,000 111,000 116,000</td>
</tr>
<tr>
<td></td>
<td>KG 45,722 47,174 49,895 50,349 52,617</td>
</tr>
<tr>
<td>PERCENT OF WEIGHT ON MAIN GEAR</td>
<td>SEE SECTION 7.4</td>
</tr>
</tbody>
</table>

**STANDARD TIRES AND BRAKES**

<table>
<thead>
<tr>
<th>NOSE GEAR TIRE SIZE</th>
<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>NOSE GEAR TIRE PRESSURE</td>
<td>PSI</td>
<td>135 135 145 145 145</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>9.49 9.49 10.19 10.19 10.19</td>
<td></td>
</tr>
<tr>
<td>MAIN GEAR TIRE SIZE</td>
<td>IN</td>
<td>40 x 14 – 16 22 PR</td>
<td>40 x 14 – 16 24 PR</td>
</tr>
<tr>
<td>MAIN GEAR TIRE PRESSURE</td>
<td>PSI</td>
<td>141 146 156 157 158</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>9.91 10.27 10.97 11.04 11.67</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 16 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOSE GEAR TIRE PRESSURE</td>
<td>PSI</td>
<td>145 145 145 145 145</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>10.19 10.19 10.19 10.19 10.19</td>
</tr>
<tr>
<td>MAIN GEAR TIRE SIZE</td>
<td>IN</td>
<td>C40 X 14 – 21 22 PR</td>
</tr>
<tr>
<td>MAIN GEAR TIRE PRESSURE</td>
<td>PSI</td>
<td>141 146 156 157 164</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>9.91 10.27 10.97 11.04 11.53</td>
</tr>
</tbody>
</table>
### 7.2.3 Landing Gear Footprint: Model Advanced 737-200

**NOTE:** SEE PREVIOUS PAGE FOR TIRE LAYOUT

<table>
<thead>
<tr>
<th>Units</th>
<th>Model 737-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM DESIGN TAXI WEIGHT</td>
<td>LB</td>
</tr>
<tr>
<td></td>
<td>KG</td>
</tr>
</tbody>
</table>

**PERCENT OF WEIGHT ON MAIN GEAR**

**STANDARD TIRES AND BRAKES**

<table>
<thead>
<tr>
<th>Nose Gear Tire Size</th>
<th>IN</th>
<th>24 x 7.7 – 10 16 PR</th>
<th>(NOT AVAILABLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nose Gear Tire Pressure</td>
<td>PSI</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>9.84</td>
<td></td>
</tr>
<tr>
<td>Main Gear Tire Size</td>
<td>IN</td>
<td>40 x 14 – 16 24 PR</td>
<td></td>
</tr>
<tr>
<td>Main Gear Tire Pressure</td>
<td>PSI</td>
<td>166</td>
<td>168</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>11.67</td>
<td>11.81</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 16 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nose Gear Tire Pressure</td>
<td>PSI</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>9.84</td>
</tr>
<tr>
<td>Main Gear Tire Size</td>
<td>IN</td>
<td>C40 X 14 – 21 24 PR</td>
</tr>
<tr>
<td>Main Gear Tire Pressure</td>
<td>PSI</td>
<td>164</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>11.53</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>
<th>C24.5 x 18.5 – 12 12 PR</th>
<th>(NOT AVAILABLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nose Gear Tire Pressure</td>
<td>PSI</td>
<td>104</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>7.31</td>
<td>7.31</td>
<td></td>
</tr>
<tr>
<td>Main Gear Tire Size</td>
<td>IN</td>
<td>C40 X 18 - 17 20 PR</td>
<td>C40 X 18 - 17 20 PR</td>
<td></td>
</tr>
<tr>
<td>Main Gear Tire Pressure</td>
<td>PSI</td>
<td>95</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>6.68</td>
<td>6.75</td>
<td></td>
</tr>
</tbody>
</table>
### 7.2.4 Landing Gear Footprint: Model Advanced 737-300, -400, -500

#### Not To Scale

![Diagram](image)

#### MAXIMUM DESIGN TAXI WEIGHT

<table>
<thead>
<tr>
<th>Units</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>143,000</td>
</tr>
<tr>
<td>KG</td>
<td>56,699 TO 63,503</td>
<td>63,049</td>
<td>64,864</td>
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</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>27 x 7.75 – 15</th>
<th>27 x 7.75 – 15</th>
<th>27 x 7.75 – 15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10 PR</td>
<td>12 PR</td>
<td>12 PR</td>
</tr>
<tr>
<td>PSI</td>
<td>166</td>
<td>171</td>
<td>172</td>
<td>173</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>11.67</td>
<td>12.02</td>
<td>12.09</td>
<td>12.16</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Gear Tire Size</th>
<th>IN</th>
<th>H40 x 14.5 – 19</th>
<th>H40 x 14.5 – 19</th>
<th>H42 x 16 – 19</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>24 PR</td>
<td>26 PR</td>
<td>26 PR</td>
</tr>
<tr>
<td>PSI</td>
<td>180 TO 201</td>
<td>203</td>
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<td>211</td>
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<tr>
<td>KG/CM²</td>
<td>12.65 TO 14.13</td>
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#### LOW PRESSURE TIRES

<table>
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<th>24 x 7.75 – 15</th>
<th>24 x 7.75 – 15</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10 PR</td>
<td>12 PR</td>
<td>12 PR</td>
</tr>
<tr>
<td>PSI</td>
<td>166</td>
<td>171</td>
<td>172</td>
<td>173</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>11.67</td>
<td>12.02</td>
<td>12.09</td>
<td>12.16</td>
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<table>
<thead>
<tr>
<th>Main Gear Tire Size</th>
<th>IN</th>
<th>H42 X 16 – 19</th>
<th>H42 X 16 – 19</th>
<th>H42 X 16 – 19</th>
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</thead>
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<tr>
<td></td>
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<td>24 PR</td>
<td>24 PR</td>
<td>24 PR</td>
</tr>
<tr>
<td>PSI</td>
<td>152 TO 170</td>
<td>171</td>
<td>176</td>
<td>177</td>
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<tr>
<td>KG/CM²</td>
<td>10.69 TO 11.95</td>
<td>12.02</td>
<td>12.37</td>
<td>12.44</td>
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</tbody>
</table>

#### Note:

1. SEE SEC 7.11 - TIRE INFLATION CHART, FOR TIRE PRESSURES AT INTERMEDIATE WEIGHTS.
7.2.5 Landing Gear Footprint: Model Advanced 737-600, -700, -800, -900, -900ER With and Without Winglets

### UNITS

<table>
<thead>
<tr>
<th></th>
<th>737-600</th>
<th>737-700</th>
<th>737-800</th>
<th>737-900</th>
<th>737-900ER</th>
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<tbody>
<tr>
<td>MAXIMUM DESIGN TAXI WEIGHT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LB</td>
<td>124,500 THRU 145,000</td>
<td>133,500 THRU 155,000</td>
<td>156,000 THRU 174,700</td>
<td>164,500 THRU 174,700</td>
<td>164,500 THRU 188,200</td>
</tr>
<tr>
<td>KG</td>
<td>56,472 THRU 65,771</td>
<td>60,554 THRU 70,307</td>
<td>70,760 THRU 79,242</td>
<td>74,616 THRU 79,242</td>
<td>74,616 THRU 85,366</td>
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</table>

<table>
<thead>
<tr>
<th>NOSE GEAR TIRE SIZE</th>
<th>IN</th>
<th>27 x 7.7 - 15 12 PR</th>
<th>27 x 7.75 - 15 12 PR</th>
<th>27 x 7.75 - 15 12 PR</th>
<th>27 x 7.75 - 15 12 PR</th>
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</thead>
<tbody>
<tr>
<td>NOSE GEAR PSI</td>
<td></td>
<td>206</td>
<td>205</td>
<td>185</td>
<td>185</td>
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<tr>
<td>NOSE GEAR KG/CY²</td>
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<td>14.50</td>
<td>14.44</td>
<td>13.03</td>
<td>13.03</td>
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<tr>
<td>MAIN GEAR TIRE SIZE</td>
<td>IN</td>
<td>H43.5 x 16.0 - 21 24PR OR 26 PR</td>
<td>H44.5 x 16.0 - 21 26 PR</td>
<td>H44.5 x 16.5 - 21 28 PR</td>
<td>H44.5 x 16.5 - 21 28 PR</td>
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<tr>
<td>MAIN GEAR PSI</td>
<td></td>
<td>182 THRU 205</td>
<td>197 THRU 205</td>
<td>204 THRU 205</td>
<td>204 THRU 205</td>
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<table>
<thead>
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</thead>
<tbody>
<tr>
<td>MAN GEAR TIRE SIZE</td>
<td>IN</td>
<td>H44.5 x 16.5 - 21 28PR (1)</td>
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<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
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<tr>
<td>MAN GEAR TIRE PRESSURE</td>
<td>KG/CY²</td>
<td>11.81 THRU 14.41</td>
<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
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**NOTE:** 1. H44.5 x 16.5 - 21 28PR TIRE CERTIFICATED ON 737-600 UP TO 144,000 LB (65,317 KG)
### 7.2.6 Landing Gear Footprint: Model 737 BBJ, 737 BBJ2

![Diagram of landing gear footprint](Diagram.png)

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<th>UNITS</th>
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<th>737-BBJ2</th>
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<td><strong>MAXIMUM DESIGN TAXI WEIGHT</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LB</td>
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<td>174,700</td>
</tr>
<tr>
<td>KG</td>
<td></td>
<td>77,790</td>
<td>79,250</td>
</tr>
<tr>
<td><strong>PERCENT OF WEIGHT ON MAIN GEAR</strong></td>
<td></td>
<td></td>
<td>SEE SECTION 7.4</td>
</tr>
<tr>
<td><strong>NOSE GEAR TIRE SIZE</strong></td>
<td>IN</td>
<td>27 x 7.7 - 1512 PR</td>
<td></td>
</tr>
<tr>
<td><strong>NOSE GEAR TIRE PRESSURE</strong></td>
<td>PSI</td>
<td>185</td>
<td>185</td>
</tr>
<tr>
<td>KG/CM^2</td>
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<td>13.03</td>
<td>13.03</td>
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<tr>
<td><strong>MAIN GEAR TIRE SIZE</strong></td>
<td>IN</td>
<td>H44.5 x 16.5 - 2128 PR</td>
<td>H44.5 x 16.5 - 2128 PR</td>
</tr>
<tr>
<td><strong>MAIN GEAR TIRE PRESSURE</strong></td>
<td>PSI</td>
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<td>204</td>
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<tr>
<td>KG/CM^2</td>
<td></td>
<td>14.34</td>
<td>14.34</td>
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7.3 MAXIMUM PAVEMENT LOADS

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>AIRPLANE MODEL</th>
<th>UNITS</th>
<th>MAX DESIGN TAXI WEIGHT</th>
<th>( V_{NG} ) STATIC AT MOST FWD C.G.</th>
<th>( V_{MG} ) STATIC + BRAKING 10 FT/SEC DECEL</th>
<th>( V_{MG} ) PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>( H ) PER STRUT AT INSTANTANEOUS BRAKING (( \mu = 0.8 ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>LB</td>
<td>97,800</td>
<td>14,000</td>
<td>21,500</td>
<td>45,200</td>
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<tr>
<td></td>
<td>KG</td>
<td>44,362</td>
<td>6,350</td>
<td>9,752</td>
<td>20,503</td>
<td>6,849</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>
<td>16,100</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>47,174</td>
<td>8,255</td>
<td>10,886</td>
<td>21,773</td>
<td>7,303</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>
<td>17,300</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>50,349</td>
<td>8,029</td>
<td>11,612</td>
<td>23,133</td>
<td>7,847</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>
<td>18,000</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>52,617</td>
<td>7,484</td>
<td>11,431</td>
<td>23,950</td>
<td>8,165</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>
<td>18,200</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>53,298</td>
<td>7,167</td>
<td>10,660</td>
<td>24,721</td>
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</tr>
<tr>
<td>737-200</td>
<td>LB</td>
<td>100,800</td>
<td>14,700</td>
<td>21,400</td>
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<td>13,800</td>
</tr>
<tr>
<td></td>
<td>KG</td>
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<td>6,668</td>
<td>9,707</td>
<td>21,228</td>
<td>6,260</td>
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<td>737-200</td>
<td>LB</td>
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<td>16,100</td>
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<td>51,000</td>
<td>17,000</td>
</tr>
<tr>
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<td>7,303</td>
<td>10,886</td>
<td>23,133</td>
<td>7,711</td>
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<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>
<td>16,800</td>
</tr>
<tr>
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<td>KG</td>
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<td>7,484</td>
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</tr>
<tr>
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<tr>
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<td>7,439</td>
<td>11,204</td>
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<tr>
<td>737-200, 200C</td>
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</table>
7.3.2 Maximum Pavement Loads: Model 737-300, -400, -500

\[ V_{NG} = \text{MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY} \]

\[ V_{MG} = \text{MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY} \]

\[ H = \text{MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING} \]

**NOTE:** ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>UNITS</th>
<th>MAX DESIGN TAXI WEIGHT</th>
<th>Static at Most FWD C.G.</th>
<th>Static + Braking 10 FT/SEC² Decel</th>
<th>( V_{NG} ) PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>( V_{MG} ) PER STRUT AT INSTANTANEOUS BRAKING (( \mu = 0.8 ))</th>
<th>H PER STRUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-300</td>
<td>LB</td>
<td>125,000</td>
<td>154,000</td>
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<td>19,400</td>
<td>46,600</td>
</tr>
<tr>
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<td>23,100</td>
<td>58,300</td>
<td>19,400</td>
<td>46,600</td>
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</tr>
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<td>23,400</td>
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<td>21,000</td>
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<td>22,589</td>
</tr>
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<td>23,088</td>
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<td>19,400</td>
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<td>9,798</td>
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<td>737-400</td>
<td>LB</td>
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<td>22,200</td>
<td>53,700</td>
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<td>24,358</td>
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<td>25,628</td>
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<td>56,500</td>
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<td>10,614</td>
<td>25,628</td>
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<td>25,000</td>
<td>53,700</td>
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<td>57,700</td>
<td>19,400</td>
<td>46,200</td>
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<td>20,956</td>
</tr>
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<td>20,800</td>
<td>49,400</td>
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</tbody>
</table>
7.3.3 Maximum Pavement Loads: Model 737-600, -700, -800, -900, -900ER With and Without Winglets

\[ V_{\text{NG}} = \text{MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY} \]
\[ V_{\text{MG}} = \text{MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY} \]
\[ H = \text{MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING} \]

**NOTE:** ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

![Diagram of airplane showing V_{\text{NG}}, V_{\text{MG}}, and H]

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>UNITS</th>
<th>MAX DESIGN TAXI WEIGHT</th>
<th>( V_{\text{NG}} )</th>
<th>( V_{\text{MG}} ) PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>( H ) PER STRUT AT INSTANTANEOUS BRAKING (( \mu = 0.8 ))</th>
</tr>
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<tbody>
<tr>
<td>737-600</td>
<td>LB</td>
<td>124,500</td>
<td>16,839</td>
<td>26,489</td>
<td>58,333</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>56,472</td>
<td>7,638</td>
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</tr>
<tr>
<td>737-600</td>
<td>LB</td>
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<td>19,020</td>
<td>30,180</td>
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<td>KG</td>
<td>65,317</td>
<td>8,627</td>
<td>13,689</td>
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<td>737-600</td>
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<td>17,558</td>
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<td>12,115</td>
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<td>737-700</td>
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<td>18,740</td>
<td>29,265</td>
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<td>27,552</td>
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<tr>
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<td>70,750</td>
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<td>17,059</td>
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<td>737-800</td>
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<td>14,998</td>
<td>23,369</td>
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<td>85,366</td>
<td>6,897</td>
<td>11,254</td>
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7.3.4 Maximum Pavement Loads: Model 737 BBJ, 737 BBJ2

\( V_{\text{NG}} \) = Maximum vertical nose gear ground load at most forward center of gravity

\( V_{\text{MG}} \) = 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: Maximum Pavement Loads

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>UNITS</th>
<th>MAX DESIGN TAXI WEIGHT</th>
<th>( V_{\text{NG}} ) STATIC AT MOST FWD C.G.</th>
<th>( V_{\text{NG}} ) STATIC + BRAKING 10 FT/SEC² DECEL</th>
<th>( V_{\text{MG}} ) PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>( H ) PER STRUT AT INSTANTANEOUS BRAKING (( \mu = 0.8 ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>737 BBJ</td>
<td>LB</td>
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<td>17,400</td>
<td>29,400</td>
<td>78,700</td>
<td>26,600</td>
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<td>KG</td>
<td>77,800</td>
<td>7,900</td>
<td>13,340</td>
<td>35,700</td>
<td>12,100</td>
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<tr>
<td>737 BBJ2</td>
<td>LB</td>
<td>174,700</td>
<td>15,100</td>
<td>24,900</td>
<td>81,700</td>
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</tr>
<tr>
<td></td>
<td>KG</td>
<td>79,250</td>
<td>6,850</td>
<td>11,300</td>
<td>37,050</td>
<td>12,300</td>
</tr>
</tbody>
</table>
7.4  LANDING GEAR LOADING ON PAVEMENT

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: 737-500

[Graph showing landing gear loading on pavement with various weight limits and calculations.]

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7.4.7 Landing Gear Loading on Pavement: 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 737BBJ
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

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)

CALIFORNIA BEARING RATIO, CBR

WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4)

98,880 (44,815)
85,000 (38,535)
70,000 (31,751)
55,000 (24,948)

ANNUAL DEPARTURES
1,200
5,000
10,000
15,000
25,000

*20-YEAR PAVEMENT LIFE

10,000 COVERAGES (USED FOR ACN CALCULATIONS)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT C.G. (104,000 LB MTW)

FLEXIBLE PAVEMENT THICKNESS, h

CENTIMETERS

10 15 20 30 40 50 60 70 80 90 100 120
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

NOTES:
* TIRES – 40 x 14 – 16 24 PR; C40 x 14 – 21 24 PR
* PRESSURE RANGE FROM 156 TO 168 PSI (10.97 TO 11.81 KG/SC CM)
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)
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

NOTES:
* TIRES – C40 x 18 – 17 20 PR
* PRESSURE RANGE AT 95 OR 96 PSI (6.68 OR 6.75 KG/SC CM)
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, 25 PR, H42 x 16-19 24 PR, 26 PR
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 CONVERSION

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 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).
7.6.1 Flexible Pavement Requirements - LCN Method: Model 737-100, -200 at 140,000 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
7.6.4 Flexible Pavement Requirements - LCN Method: Model 737-200
ADV at 120,000 to 128,600 LB (54,431 to 58,332 KG) MTW
7.6.5 Flexible Pavement Requirements - LCN Method: Model 737-300, -400, -500
7.6.6 Flexible Pavement Requirements - LCN Method: Model 737-600, -700, -800, -900, -900ER With and Without Winglets, 737 BBJ, 737 BBJ2
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 (47,170KG) MTW

NOTES:
* TIRES - H40 x 14 - 16 22 PR; C40 x 14 - 21 22PR
* PRESSURE RANGE FROM 136 TO 146 PSI (9.70 TO 10.27 KG/ SQ CW)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT C.G. (104,000 LB MTW)

WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4) (LB) (KG)
98,800 (44,813)
85,000 (38,555)
70,000 (31,751)
55,000 (24,948)

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 FOLD" PORTLAND CEMENT ASSOCIATION.
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 = H40 x 14 = 16 24 PR; C40 x 14 = 21 24 PR
* PRESSURE RANGE FROM 156 TO 168 PSI (10.97 TO 18.81 KG/SQ CM)

REFERENCES:
"DESIGN OF CONCRETE AIRPORT PAVEMENT" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN - PROGRAM FOILE" 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)

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 (40,825)
70,000 (31,751)
50,000 (22,680)

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 POLEB" PORTLAND CEMENT ASSOCIATION.
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

NOTES:
* TIRES = H40 x 14-16 24PR; C40 x 14-1 24PR OR 26PR; H40 x 14.5-19 24PR
* PRESSURE RANGE FROM 170 TO 182 PSI (11.95 TO 12.80 KG/SQ CM)

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 PRED", PORTLAND CEMENT ASSOCIATION.
7.7.5 Rigid Pavement Requirements - Portland Cement Association
Design Method: Model 737-300, -400, -500

NOTES:

* Tires = H40 x 14.5-19 24PR, 26PR; H42 x 16-19 26PR

weights 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)

maximum possible main
design truck weight and aft c.g. (150,500 lb wt)

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 = 500 but deviate
slightly for other values of k.

references:
"design of concrete airport
pavement and computer
program for airport pavement
design - program pool"
portland cement association.
7.7.6  Rigid Pavement Requirements - Portland Cement Association
Design Method: Model 737-300, -400, -500 (Low Pressure Tires)

NOTES:

* TIRES – H42 x 16-19 26PR
7.7.7 Rigid Pavement Requirements - Portland Cement Association
Design Method: Model 737-600, -700, -800, -900, -900ER With and Without Winglets, 737 BBJ, 737 BBJ2
7.7.8  Rigid Pavement Requirements - Portland Cement Association
Design Method: Model 737-600, -700 (Optional Tires)

NOTE: TIRES - H44.5 x 16.5 - 21 28PR

Max possible main gear load at maximum design taxi weight and aft c.g. (153,500 lb MTW)

Weight on main landing gear (see sec 7.4) (kg)
- 145,000 (66,065)
- 120,000 (54,471)
- 100,000 (45,359)
- 80,000 (36,287)
- 60,000 (27,215)

Pavement thickness (inches)

F.S. (lbs/sq ft)

Allowable working stress

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 computers program for airport pavement design - Portland cement association.
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 (\(k\)) of the pavement must be known.

In the examples shown in Section 7.8.2 for a rigid pavement with a radius of relative stiffness of 47 with an LCN of 91, and 7.8.3 for a rigid pavement with a radius of relative stiffness of 47 with an LCN of 87, the apparent maximum allowable weight permissible on the main landing gear is 600,000 lb (272,155 kg) for an airplane with 221-psi (15.54 kg/cm²) main tires.

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 Design Manual, Part 2, "Aerodrome Physical Characteristics," Chapter 4, Paragraph 4.1.5.7v, 2nd Edition dated 1965).
### 7.8.1 Radius of Relative Stiffness (Reference: Portland Cement Association)

The radius of relative stiffness is given by:

\[
\ell = \sqrt[4]{\frac{Ed^3}{12(1-\mu^2)k}} = 24.1562 \sqrt[4]{\frac{d^3}{k}}
\]

**WHERE:**
- \(E = \) YOUNG'S MODULUS OF ELASTICITY = 4 x 10^8 psi
- \(k = \) SUBGRADE MODULUS, LB PER CU IN
- \(d = \) RIGID PAVEMENT THICKNESS, IN
- \(\mu = \) POISSON'S RATIO = 0.15

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7.8.2 Rigid Pavement Requirements - LCN Conversion: Model 737-100, - 200 to 104,000 LB (47,170 KG) MTW

Diagram with graphs and data points.
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
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)
7.8.5 Rigid Pavement Requirements - LCN Conversion: Model ADV
737-200 at 120,000 to 128,600 LB (54,430 to 58,330 KG) MTW

**NOTES:**
- TIRES: 4Gx14-16, 24PR, C40x14-21, 24PR OR C28PR OR 26PR, H40x14-19, 24PR
- PRESSURE RANGE FROM 170 TO 182 PSI (11.95 to 12.80 BAR)
- EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED FROM ICAO AERODROME MANUAL, PART 2 PAR 4.1.3, DATED 1965.

[Graph depicting load classification number (LCN) vs. load in pounds (LB) or kilograms (KG)].

**Equivalent Single Wheel Load:**
- Maximum possible main gear load of 737-200.
- Radius of relative stiffness, $l$. 

**Conversion Factors:**
- Inches to centimeters: 1 inch = 2.54 centimeters.
- Tons to kilograms: 1 ton = 1,000 kilograms.
- Miles to kilometers: 1 mile = 1.60934 kilometers.
7.8.6 Rigid Pavement Requirements - LCN Conversion: Model 737-300, -400, -500
7.8.7 Rigid Pavement Requirements - LCN Conversion: Model 737-600, -700, -800, -900, -900ER With and Without Winglets, 737 BBJ, 737 BBJ2
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
7.9.2 Rigid Pavement Requirements – FAA Design Method: Model ADV 737-200 (Low Pressure Tires)
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)
### 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 TYPE</th>
<th>MAXIMUM TAXI WEIGHT (lb)</th>
<th>MINIMUM WEIGHT (1)</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>
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<tr>
<td>737-100</td>
<td>111,000 (50,349)</td>
<td>62,000 (28,123)</td>
<td>45.95</td>
<td>157 (1.08)</td>
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<td>737-200</td>
<td>128,600 (58,332)</td>
<td>65,300 (29,620)</td>
<td>45.96</td>
<td>182 (1.25)</td>
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<td>737-300</td>
<td>140,000 (63,503)</td>
<td>72,540 (32,904)</td>
<td>45.43</td>
<td>201 (1.38)</td>
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<td>150,500 (68,266)</td>
<td>74,170 (33,643)</td>
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<td>204 (1.41)</td>
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<td>174,700 (79,242)</td>
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<td>737 BBJ2</td>
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<td>98,495(44,676)</td>
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**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 FAA ANNEX 14, 1996 EDITION.
2. SEE SECTION 7.4 FOR LANDING GEAR LOADING.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.6

1,000 LB 40,000 KG
100 45
90 40
80 35
70 30
60 25
50 20
40 15
30 10
20 5
10 0
0 5
10
20
30
40
50
60
70
80
90
100
110
120
130

AIRCRAFT GROSS WEIGHT

PRESSURE RANGE FROM 135 TO 145 PSI (9.47 TO 10.27 KG/SQ CM)

TIRE SIZE = H-40 x 1.6-6, 2.25R, C-40 x 1.6-21, 22TR

CORE D = CBR 3 (LOW)
CORE C = CBR 6 (MEDIUM)
CORE B = CBR 10 (HIGH)
CORE A = CBR 15 (HIGH)

AIRCRAFT CLASSIFICATION NUMBER (ACN)
7.10.2 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
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)
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
7.10.5 Aircraft Classification Number - Flexible Pavement: Model 737-300
7.10.6 Aircraft Classification Number - Flexible Pavement: Model 737-300 (Low Pressure Tires)
7.10.7 Aircraft Classification Number - Flexible Pavement: Model 737-400

NOTES:
- Tires = H42 x 16-19 ZEP (Ultra Low)
- Code D = CBR 3 (Low)
- Code C = CBR 6 (High)
- Code A = CBR 10 (High)

1. ACR was determined as referenced in FAA Circular 150/5280-1, 8th Edition, March 1983.
2. To determine main landing gear loading.
3. See section 7.4 for main landing gear load.
4. Percent weight on main landing gear: 9.35
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

NOTES:
1. ACN was determined as referenced in AC 150/5340-12B, FEBRUARY 1983.
2. To determine main landing gear loading, see section 7.4.
3. Percent weight on main landing gear: 92.2

CODE A = CBR 10 (HARD)
CODE B = CBR 15 (MEDIUM)
CODE C = CBR 6 (LOW)
CODE D = CBR 3 (ULTRA LOW)

AIRCRAFT CLASSIFICATION NUMBER (ACN)
7.10.10 Aircraft Classification Number - Flexible Pavement: Model 737-500 (Low Pressure Tires)

NOTES:
- Tires - H42 x 16-19 24PR
- Code A = CBR 15 (HIGH)
- Code B = CBR 10 (MEDIUM)
- Code C = CBR 6 (LOW)
- Code D = CBR 3 (ULTRA LOW)

NOTES:
1. AIRCRAFT CATEGORIES AS REFERENCED IN AMENDMENT 38 TO FAA ANNEX 14, 6TH EDITION, MARCH, 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 4.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.2

AIRCRAFT GROSS WEIGHT (1,000 KG)
7.10.11 Aircraft Classification Number - Flexible Pavement: Model 737-600
7.10.12 Aircraft Classification Number - Flexible Pavement: Model 737-600 (Optional Tires)
7.10.13 Aircraft Classification Number - Flexible Pavement: Model 737-700 With and Without Winglets
NOTES:
* TIRES - M44.9 x 16.5 - 21 28PR
* PRESSURE - 179 PSI (12.59 KG/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: 91.7

AIRCRAFT CLASSIFICATION NUMBER (ACN)

1,000 LB

(1,000 KG)

AIRCRAFT GROSS WEIGHT

80 90 100 110 120 130 140 150 160

40 45 50 55 60 65 70

Flexible Pavement: Model 737-700 (Optional Tires) With and Without Winglets
7.10.15 Aircraft Classification Number - Flexible Pavement: Model 737 BBJ

- Aircraft Classification Number
- Flexible Pavement: Model 737 BBJ
7.10.16 Aircraft Classification Number - Flexible Pavement: Model 737-800 With and Without Winglets
7.10.17 Aircraft Classification Number - Flexible Pavement: Model 737 BBJ2
NOTES:

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: Model 737-900ER, -900ER With Winglets

- TIRES - H44.5 x 16.5 - 21, 30PR
- PRESSURE - 220 PSI (15.47 KG/SQ CM)

NOTES:

- 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: 94.58
7.10.20 Aircraft Classification Number - Rigid Pavement: Model 737-100, -200 To 104,000 LB (47,170 KG) MTW
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
7.10.24 Aircraft Classification Number - Rigid Pavement: Model 737-300

NOTES:

1. H40 x 14.5-19 24PR

2. CODE D = k = 750 (ULTRA LOW)

3. CODE A = k = 550 (HIGH)

4. CODE B = k = 350 (MEDIUM)

5. W = k = 175

6. W = k = 85

7. W = k = 45

8. W = k = 35

9. W = k = 25

10. W = k = 15

11. W = k = 10

12. W = k = 5

13. W = k = 3

14. W = k = 2

15. W = k = 1

16. W = k = 0.5

17. W = k = 0.2

18. W = k = 0.1

19. W = k = 0.05

20. W = k = 0.02

21. W = k = 0.01

22. W = k = 0.005

23. W = k = 0.002

24. W = k = 0.001

25. W = k = 0.0005

26. W = k = 0.0002

27. W = k = 0.0001

28. W = k = 0.00005

29. W = k = 0.00002

30. W = k = 0.00001

31. W = k = 0.000005

32. W = k = 0.000002

33. W = k = 0.000001

34. W = k = 0.0000005

35. W = k = 0.0000002

36. W = k = 0.0000001

37. W = k = 0.00000005

38. W = k = 0.00000002

39. W = k = 0.00000001

40. W = k = 0.000000005

41. W = k = 0.000000002

42. W = k = 0.000000001
7.10.25 Aircraft Classification Number - Rigid Pavement: Model 737-300 (Low Pressure Tires)
NOTES:
* TIRES - H42 x 16-19 26PR

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 3B TO ICAO ANNEX 14, "AERODROMES", 5TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 90.85

AIRCRAFT CLASSIFICATION NUMBER

AIRCRAFT GROSS WEIGHT

1,000 LB

(1,000 KG)
7.10.27 Aircraft Classification Number - Rigid Pavement: Model 737-400 (Low Pressure Tires)
7.10.28 Aircraft Classification Number - Rigid Pavement: Model 737-500

NOTES:
2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 92.2

* TIRES - H40 x 14.5-19 24PR

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)
7.10.29 Aircraft Classification Number - Rigid Pavement: Model 737-500
(Low Pressure Tires)
7.10.30 Aircraft Classification Number - Rigid Pavement: Model 737-600
7.10.31 Aircraft Classification Number - Rigid Pavement: Model 737-600 (Optional Tires)
7.10.32 Aircraft Classification Number - Rigid Pavement: Model 737-700 With and Without Winglets
7.10.33 Aircraft Classification Number - Rigid Pavement: Model 737-700 (Optional Tires) With and Without Winglets

NOTES:
1. TIRE PRESSURE = 165 - 21, 28 PS (35, 69 KGF/CM)

CODE D = k = 75 (ULTRA LOW)
CODE C = k = 150 (LOW)
CODE B = k = 300 (MEDIUM)
CODE A = k = 550 (HIGH)

NOTES WAS DETERMINED AS REFERENCED IN

1. TO DETERMINE MAIN LANDING GEAR LOADING,
   PERCENT WEIGHT ON MAIN LANDING GEAR: 91.7

AIRCRAFT GROSS WEIGHT
(1,000 KG)

AIRCRAFT CLASSIFICATION NUMBER (ACN)

REV A
September 2020

7-98
7.10.34 Aircraft Classification Number - Rigid Pavement: Model 737 BBJ

NOTES:
1. A/CN1 was determined as referenced in "Airports - 8th Edition, March 1983".
2. To determine Main Landing Gear loading.
3. See Section 7.4.

ACN = 105, 100, 95, 90, 85, 80, 75, 70, 65, 60, 55, 50, 45, 40, 35, 30, 25, 20, 15, 10, 5, 0

CODE D = k = 75 (ULTRA LOW) 150 (LOW) 300 (MEDIUM) 550 (HIGH)
CODE C = k = 50
CODE B = k = 30
CODE A = k = 20

PRESSURE = 204 PSIG (14.34 kg/cm²)

ACR1 = 0.045 x 16.5 = 21.288
7.10.35 Aircraft Classification Number - Rigid Pavement: Model 737-800
With and Without Winglets

NOTES:
1. ACN was determined as referenced in Section 7.4.
2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 93.58

CODE D = k = 75 (ULTRA LOW)
CODE C = k = 150 (LOW)
CODE B = k = 300 (MEDIUM)
CODE A = k = 550 (HIGH)

PRESSURE: 20 lb/sq in (143.4 kPa)
7.10.36 Aircraft Classification Number - Rigid Pavement: Model 737 BBJ2
7.10.37 Aircraft Classification Number - Rigid Pavement: Model 737-900 With and Without Winglets
7.10.38 Aircraft Classification Number - Rigid Pavement: Model 737-900ER With and Without Winglets

NOTES:
1. ACN was determined as referenced in ICAO ANNEX 14, "AERODROMES".
2. Tolerances for main and nose landing gear loading, see section 7.14.
3. Percent weight on main landing gear: 94.5%

TIRE PRESSURE = 220 PSI (15.37 kg/cm²)
7.11 TIRE INFLATION CHART (737-100 THRU -500 ONLY)

7.11.1 Tire Inflation Chart: Model 737-100
7.11.2 Tire Inflation Chart: Model 737-100, -200
7.11.3 Tire Inflation Chart: Model ADV 737-200
7.11.4 Tire Inflation Chart: Model 737-200 (Low Pressure Tires)
7.11.5 Tire Inflation Chart: Model 737-300
7.11.6 Tire Inflation Chart: Model 737-400
7.11.7 Tire Inflation Chart: Model 737-500
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

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
9.1 MODEL 737-100

9.1.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-100

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.1.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-100

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.1.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-100

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.1.4  Scaled Drawings – 1 IN. = 50 FT: Model 737-100

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.1.5  Scaled Drawings – 1 IN. = 100 FT: 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
9.1.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-100

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.1.7 Scaled Drawings – 1:500: Model 737-100

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

9.1.8 Scaled Drawings – 1:500: Model 737-100

![Scaled Drawing of Model 737-100](image-url)
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.1.9 Scaled Drawings – 1:1000: 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
9.1.10  Scaled Drawings – 1:1000: Model 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2 MODEL 737-200

9.2.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-200

Legend:
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
H 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
9.2.2  Scaled Drawings – 1 IN. = 32 FT: Model 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-200

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
M  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

9.2.4 Scaled Drawings – 1 IN. = 50 FT: Model 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.5 Scaled Drawings – 1 IN. = 100 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

9.2.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.7 Scaled Drawings – 1:500: Model 737-200

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H0  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

9.2.8  Scaled Drawings – 1:500: Model 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.9   Scaled Drawings – 1:1000: 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
9.2.10  Scaled Drawings – 1:1000: Model 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3  MODEL 737-300

9.3.1  Scaled Drawings – 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
9.3.2  Scaled Drawings – 1 IN. = 32 FT: Model 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-300

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

9.3.4 Scaled Drawings – 1 IN. = 50 FT: Model 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.5 Scaled Drawings – 1 IN. = 100 FT: Model 737-300

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

9.3.6  Scaled Drawings – 1 IN. = 100 FT: Model 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.7 Scaled Drawings – 1:500: Model 737-300

![Scaled Drawing Diagram]

**LEGEND**

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<thead>
<tr>
<th>Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>AIR CONDITIONING</td>
</tr>
<tr>
<td>C</td>
<td>CARGO DOOR</td>
</tr>
<tr>
<td>E</td>
<td>ELECTRICAL</td>
</tr>
<tr>
<td>F</td>
<td>FUEL</td>
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<tr>
<td>G</td>
<td>SERVICE DOOR</td>
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<td>H</td>
<td>HYDRAULIC</td>
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<tr>
<td>H2O</td>
<td>POTABLE WATER</td>
</tr>
<tr>
<td>L</td>
<td>LAVATORY SERVICE</td>
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<tr>
<td>MLG</td>
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<td>NG</td>
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<td>PNEUMATIC (AIR START)</td>
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<td>FUEL VENT</td>
</tr>
<tr>
<td>X</td>
<td>PASSENGER DOOR</td>
</tr>
</tbody>
</table>

**Note:** For turning radius data, see Sections 4.2 and 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.8 Scaled Drawings – 1:500: Model 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.9  Scaled Drawings – 1:1000: Model 737-300

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

9.3.10  Scaled Drawings – 1:1000: Model 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4 MODEL 737-300 WITH WINGLETS

9.4.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-300 with Winglets

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

9.4.2  Scaled Drawings – 1 IN. = 32 FT: Model 737-300 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.4.3  Scaled Drawings – 1 IN. = 50 FT: Model 737-300 with Winglets

### LEGEND

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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<td>AIR CONDITIONING</td>
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<td>C</td>
<td>CARGO DOOR</td>
</tr>
<tr>
<td>E</td>
<td>ELECTRICAL</td>
</tr>
<tr>
<td>F</td>
<td>FUEL</td>
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<tr>
<td>G</td>
<td>SERVICE DOOR</td>
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<td>H</td>
<td>HYDRAULIC</td>
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<tr>
<td>H₂O</td>
<td>POTABLE WATER</td>
</tr>
<tr>
<td>L</td>
<td>LAVATORY SERVICE</td>
</tr>
<tr>
<td>MLG</td>
<td>MAIN LANDING GEAR</td>
</tr>
<tr>
<td>NG</td>
<td>NOSE LANDING GEAR</td>
</tr>
<tr>
<td>P</td>
<td>PNEUMATIC (AIR START)</td>
</tr>
<tr>
<td>V</td>
<td>FUEL VENT</td>
</tr>
<tr>
<td>X</td>
<td>PASSENGER DOOR</td>
</tr>
</tbody>
</table>

NOTE: FOR TURNING RADIUS DATA SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.4.4 Scaled Drawings – 1 IN. = 50 FT: Model 737-300 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4.5  Scaled Drawings – 1 IN. = 100 FT: 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
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

9.4.6  Scaled Drawings – 1 IN. = 100 FT: Model 737-300 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4.7 Scaled Drawings – 1:500: Model 737-300 with Winglets

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.4.8  Scaled Drawings – 1:500: Model 737-300 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4.9 Scaled Drawings – 1:1000: 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

9.4.10  Scaled Drawings – 1:1000: Model 737-300 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.5  MODEL 737-400

9.5.1  Scaled Drawings – 1 IN. = 32 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
9.5.2  Scaled Drawings – 1 IN. = 32 FT: Model 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.5.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-400

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
9.5.4  Scaled Drawings – 1 IN. = 50 FT: Model 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.5.5 Scaled Drawings – 1 IN. = 100 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

9.5.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.5.7 Scaled Drawings – 1:500: Model 737-400

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

9.5.8  Scaled Drawings – 1:500: Model 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.5.9   Scaled Drawings – 1:1000: 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
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

9.5.10 Scaled Drawings – 1:1000: Model 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6 MODEL 737-500

9.6.1 Scaled Drawings – 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

9.6.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.3  Scaled Drawings – 1 IN. = 50 FT: Model 737-500

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

9.6.4  Scaled Drawings – 1 IN. = 50 FT: Model 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.5  Scaled Drawings – 1 IN. = 100 FT: Model 737-500

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

9.6.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.7 Scaled Drawings – 1:500: Model 737-500

**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

9.6.8 Scaled Drawings – 1:500: Model 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.9  Scaled Drawings – 1:1000: Model 737-500

NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = .32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

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**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

9.6.10  Scaled Drawings – 1:1000: Model 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7  MODEL 737-600

9.7.1  Scaled Drawings – 1 IN. = 32 FT: Model 737-600

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LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H₂O  PORTABLE 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

9.7.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.7.3  Scaled Drawings – 1 IN. = 50 FT: Model 737-600

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

9.7.4  Scaled Drawings – 1 IN. = 50 FT: Model 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7.5 Scaled Drawings – 1 IN. = 100 FT: Model 737-600

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

9.7.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7.7 Scaled Drawings – 1:500: Model 737-600

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
9.7.8  Scaled Drawings – 1:500: Model 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7.9  Scaled Drawings – 1:1000: Model 737-600

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
9.7.10  Scaled Drawings – 1:1000: Model 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.8 MODEL 737-600 WITH WINGLETS

9.8.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-600 with Winglets

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

9.8.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-600 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.8.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-600 with Winglets

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

9.8.4 Scaled Drawings – 1 IN. = 50 FT: Model 737-600 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.8.5 Scaled Drawings – 1 IN. = 100 FT: Model 737-600 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
9.8.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-600 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.8.7  Scaled Drawings – 1:500: Model 737-600 with Winglets

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

9.8.8  Scaled Drawings – 1:500: Model 737-600 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.8.9  Scaled Drawings – 1:1000: Model 737-600 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

9.8.10  Scaled Drawings – 1:1000: Model 737-600 with Winglets
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.9 MODEL 737-700

9.9.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-700

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.

9.9.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-700

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.9.3  Scaled Drawings – 1 IN. = 50 FT: Model 737-700

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.9.4 Scaled Drawings – 1 IN. = 50 FT: Model 737-700

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.9.5  Scaled Drawings – 1 IN. = 100 FT: Model 737-700

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
9.9.6  Scaled Drawings – 1 IN. = 100 FT: Model 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.9.7  Scaled Drawings – 1:500: Model 737-700

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

9.9.8  Scaled Drawings – 1:500: Model 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.9.9   Scaled Drawings – 1:1000: 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
9.9.10  Scaled Drawings – 1:1000: Model 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.10 MODEL 737-700 WITH WINGLETS, 737 BBJ

9.10.1 Scaled Drawings – – 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

9.10.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-BBJ
9.10.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-700 with Winglets, 737 BBJ

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.10.4 Scaled Drawings – 1 IN. = 50 FT: Model 737-700 with Winglets, 737 BBJ

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.10.5 Scaled Drawings – 1 IN. = 100 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
9.10.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-700 with Winglets, 737 BBJ

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.10.7 Scaled Drawings – 1:500: Model 737-700 with Winglets, 737 BBJ

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
9.10.8  Scaled Drawings – 1:500: Model 737-700 with Winglets, 737 BBJ

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.10.9  Scaled Drawings – 1:1000: 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
9.10.10 Scaled Drawings – 1:1000: Model 737-700 with Winglets, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.11 MODEL 737-800

9.11.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-800

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

9.11.2  Scaled Drawings – 1 IN. = 32 FT: Model 737-800
9.11.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-800

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.11.4  Scaled Drawings – 1 IN. = 50 FT: Model 737-800

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.11.5 Scaled Drawings – 1 IN. = 100 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
9.11.6  Scaled Drawings – 1 IN. = 100 FT: Model 737-800

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.11.7 Scaled Drawings – 1:500: Model 737-800

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.11.8  Scaled Drawings – 1:500: Model 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.11.9  Scaled Drawings – 1:1000: Model 737-800

NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

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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
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.11.10 Scaled Drawings – 1:1000: Model 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12 MODEL 737-800 WITH WINGLETS, 737 BBJ2

9.12.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-800 with Winglets, 737 BBJ2

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

9.12.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-800 with Winglets, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-800 with Winglets, 737 BBJ2

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

9.12.4 Scaled Drawings – 1 IN. = 50 FT: Model 737-800 with Winglets, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12.5 Scaled Drawings – 1 IN. = 100 FT: 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

9.12.6 Scaled Drawings – 1 IN. = 100 FT: Model 737-800 with Winglets, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12.7  Scaled Drawings – 1:500: Model 737-800 with Winglets, 737 BBJ2

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
9.12.8 Scaled Drawings – 1:500: Model 737-800 with Winglets, 737 BBJ2

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.12.9 Scaled Drawings – 1:1000: 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
9.12.10 Scaled Drawings – 1:1000: Model 737-800 with Winglets, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13 MODEL 737-900, -900ER

9.13.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-900, -900ER

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

9.13.2  Scaled Drawings – 1 IN. = 32 FT: Model 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.3  Scaled Drawings – 1 IN. = 50 FT: Model 737-900, -900ER

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

9.13.4  Scaled Drawings – 1 IN. = 50 FT: Model 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.5  Scaled Drawings – 1 IN. = 100 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

9.13.6  Scaled Drawings – 1 IN. = 100 FT: Model 737-900, -900ER
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
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.8  Scaled Drawings – 1:500: Model 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.9  Scaled Drawings – 1:1000: Model 737-900, -900ER

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

9.14 MODEL 737-900, -900ER WITH WINGLETS

9.14.1 Scaled Drawings – 1 IN. = 32 FT: Model 737-900 with Winglets

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

9.14.2 Scaled Drawings – 1 IN. = 32 FT: Model 737-900 with Winglets

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.14.3 Scaled Drawings – 1 IN. = 50 FT: Model 737-900 with Winglets

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.14.4  Scaled Drawings – 1 IN. = 50 FT: Model 737-900 with Winglets

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.14.6  Scaled Drawings – 1 IN. = 100 FT: Model 737-900 with Winglets

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.14.8 Scaled Drawings – 1:500: Model 737-900 with Winglets

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
9.14.9 Scaled Drawings – 1:1000: Model 737-900 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
9.14.10 Scaled Drawings – 1:1000: Model 737-900 with Winglets

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING