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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
- Airport Operators Council International
- Air Transport Association of America
- International Air Transport Association

The airport planner may also want to consider the information presented in the "CTOL Transport Aircraft, 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
- 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 747-400 airplane for airport planners and operators, airlines, architectural and engineering consultant organizations, and other interested industry agencies. Airplane changes and available options may alter model characteristics. The data presented herein reflect typical airplanes in each model category.

For additional information contact:

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

Attention: Manager, Airport Technology
Mail Code 67-KR

1.3 A Brief Description of the 747-400

The 747-400 is the latest derivative of the 747 family of airplanes. The -400 is externally similar to the 747-300, with the additional wingtip extension with winglets and advanced high bypass ratio engines. Other characteristics unique to the 747-400 include:

- Two-crew cockpit with digital avionics
- Lightweight aluminum alloys
- Structural carbon brakes
- Optional 910,000-pound maximum takeoff weight
- Optional 3,300-gallon fuel tank in horizontal stabilizer
- Optional fuel tanks in forward cargo compartment
- Vacuum lavatories with single-point servicing
- Enhanced passenger appeal in cabin interior
- Optional crew rest compartment in aft cabin
- Fly-by-wire system

747-400

The basic 747-400 has a tri-class passenger interior arrangement. Optional arrangements include a two-class or a one-class configuration to suit traffic demands.

747-400 Domestic

The 747-400 Domestic is a high-capacity airplane designed for domestic short routes. It has a lighter maximum takeoff weight. The -400D airplane has the same wingspan planform as the -300 and has no winglets.

747-400 Combi

The 747-400 Combi airplane has a main deck cargo door installed on the left side aft of the wing. This door is used for loading pallets or containerized cargo up to 20 feet long. The main deck of the Combi airplane can be converted to either an all-passenger or a passenger/cargo configuration. In the latter configuration, cargo is in the aft fuselage. Several cargo configurations can be loaded compatible with size limits and operational procedures. The Combi can accommodate up to seven 10-foot pallets or containers.

747-400 Freighter

The 747-400 Freighter has a main deck nose door and a mechanized cargo handling system. The nose door swings up so that pallets or containers up to 40 ft (12 m) can be loaded straight in on motor-driven rollers. An optional main deck side cargo door (like the 747-400 Combi) allows loading of dimensionally taller cargo modules.

747-400ER

The 747-400ER is an increased gross weight derivative of the 747-400. The increased weight allows it carry additional fuel in order to fly over longer ranges. The 747-400ER can be equipped with up to two 3,060-gallon fuel tanks in the forward lower cargo compartment.

747-400ER Freighter

The 747-400ER Freighter is similar to the 747-400 Freighter, except for the increased gross weight capability which allows it to carry more cargo weight. This airplane is not fitted with the cargo compartment fuel tanks.

Engines

The 747-400 is equipped with four advanced high bypass ratio engines. The following table shows the available engines:

MANUFACTURER	MODEL NUMBER	RATED TAKEOFF THRUST (LB)
GENERAL ELECTRIC	CF6-80C2B1F	57,900
PRATT & WHITNEY	PW4056	56,750
ROLLS-ROYCE	RB211-524G2	58,000

The 747-400ER is equipped with four advanced high bypass ratio engines. The following table shows the available engines:

MANUFACTURER	MODEL NUMBER	RATED TAKEOFF THRUST (LB)
GENERAL ELECTRIC	CF6-80C2B5F	62,100
PRATT & WHITNEY	PW4062	63,300
ROLLS-ROYCE	RB211-524H8-T	59,500

Additional models of the above engines may be available through customer options.

Crew Rest Compartment

The 747-400 can be equipped with a cabin crew rest compartment. This is located in the aft cabin above the ceiling at Door No. 5. The compartment can be configured to a combination of bunks and seats for up to 10 crew members. Access to the compartment is through a ladder near Right Door No. 5. This is standard on the 747-400ER.

Another compartment is located in the upper deck, outside of the cockpit.

Document Applicability

This document (D6-58326-1) contains airplane characteristics data for the 747-400 and 747-400ER airplanes.

Document D6-58326-2, which contained preliminary airplane characteristics information for the 747-400ER airplanes is now cancelled and will not be revised and should be discarded.

The earlier airplane models (747-100, -200, -300, SP) are described in Document D6-58326, [747 Airplane Characteristics for Airport Planning](#).