Commercial Airplanes
Reference Guide
2022

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Boeing Commercial Airplanes Family

737-7

737-8

737-9

737-10

787-8

787-9

787-10

777-200LR

777-300ER

777-8

777-9

Welcome to the Boeing Commercial Airplanes Reference Guide. Sized for ease of use and portability, this booklet provides key technical information about every Boeing commercial airplane model currently in production as well as many out-of-production models.

For more than 100 years, Boeing has been delivering airplanes that change the world. In the jet age, Boeing defined the modern jetliner and introduced the twin-aisle cabin, glass cockpit, and countless other innovations to commercial service. Attesting to this ongoing leadership, Boeing has delivered more than 29,300 jetliners[1]—more than those produced by all other manufacturers combined.

Today, this innovation continues with the Boeing 737 MAX, 787 Dreamliner, and 777X. Individually, these airplane families let operators address a spectrum of real-world markets, from small to large and from short- to long-range. Collectively, they compose the most comprehensive and capable product line in the world.

Boeing design expertise creates airplanes that fly faster and farther than competing models and that travelers prefer for the superior passenger experience. Boeing jetliners are more sustainable, consuming less fuel, creating fewer emissions, and with innovative Boeing noise-reduction technologies, are quieter than ever. Boeing jetliners also cost less to operate. Robust and reliable, they are built to stand up to even the most demanding use day after day, year after year.

Boeing is dedicated to customer success. Demonstrating this commitment, Boeing Commercial Airplanes customers find comprehensive support services and solutions that meet their operational challenges—around the globe and around the clock.

[1]Includes Boeing and heritage McDonnell Douglas airplanes

Contents

For more information,
go to www.boeing.com

Short- to medium-range market

737-7/737-8/737-9/737-10

The 737 MAX family builds on the strengths of the market-leading Next-Generation 737 with a new engine, a new winglet, and other improvements to deliver a superior level of efficiency, reliability, and passenger appeal.

The 737 MAX is the most efficient single-aisle family of airplanes in the market—producing a 20 percent improvement in fuel use over the original Next-Generation 737 deliveries. The addition of the LEAP-1B engine, the Advanced Technology winglet, and aerodynamic and other improvements keeps the 737 MAX ahead of its competition in terms of range, fuel efficiency, and operating costs.

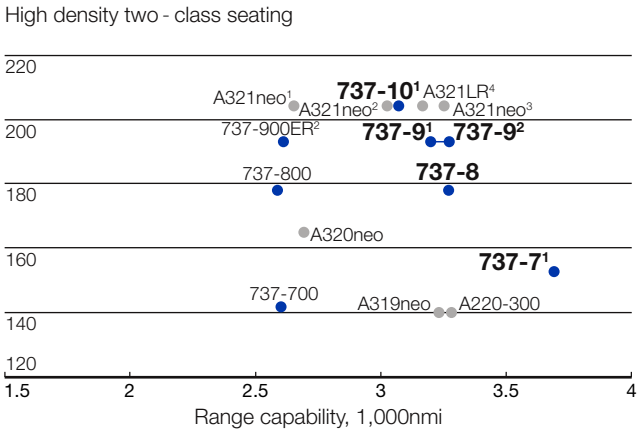
The superior fuel efficiency of the 737 MAX reduces carbon emissions by 20 percent for better environmental performance, making the 737 MAX the most sustainable single-aisle family. The 737 MAX surpasses environmental standards, with a 50 percent noise footprint reduction for airlines and airport communities.

The short- to medium-range market thrives on high utilization. High reliability and ease of maintainability will enable high utilization. The 737 MAX continues the Next-Generation 737 maintenance advantage, as well as its industry-leading record of 99.7 percent schedule reliability.

A standard feature on the 737 MAX, the Boeing Sky Interior continues to redefine the flying experience of passengers and crew. A more spacious and comfortable cabin, more personal stowage space, and better lighting continue to give passengers a more pleasurable flying experience.

The 737 MAX is the optimization of everything Boeing and our customers have learned about creating the best single-aisle airplane to provide MAX efficiency, MAX reliability, and MAX passenger appeal.

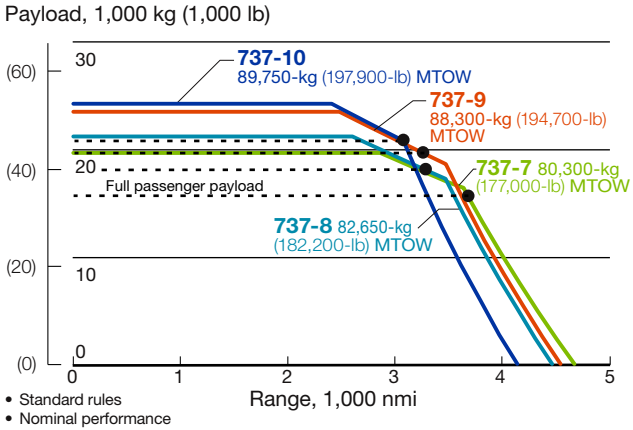
737 MAX family—flies farthest to reach more markets



• 737NG with optional winglets and 3% fuel factor

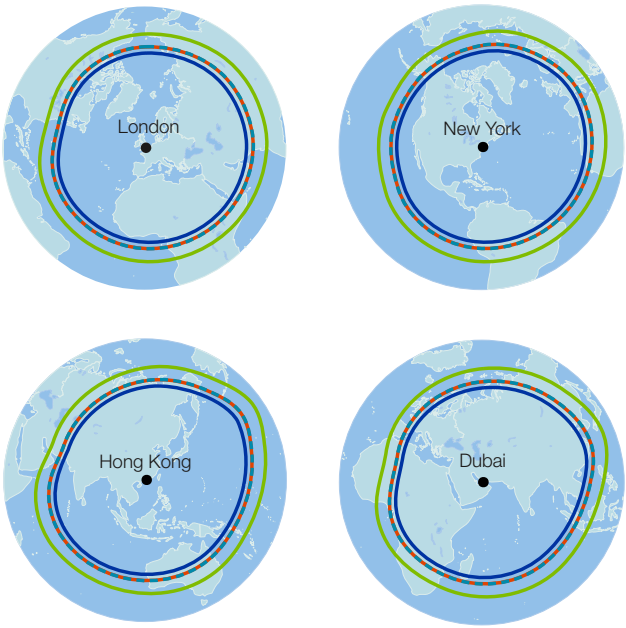
[1]Fuel volume limited
[2]Includes one auxiliary fuel tank
[3]Includes two auxiliary fuel tanks
[4]Includes three auxiliary fuel tanks

Payload-range capability



- Standard rules
- Nominal performance
- High-density two-class interiors
- 737-9 includes one auxiliary fuel tank

Range capability from



- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- High-density two-class interiors
- 737-9 includes one auxiliary fuel tank

[1]Fuel volume limited

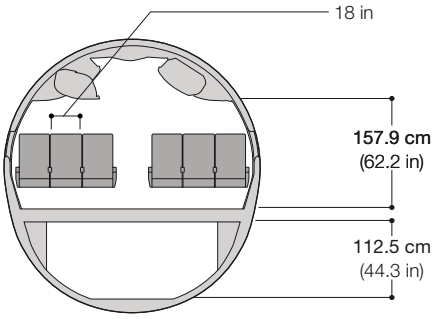
737-10[1]
204 passengers

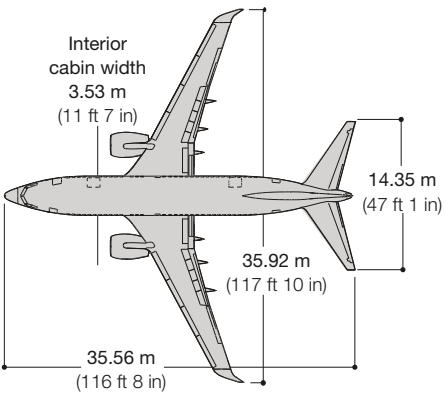
737-9
193 passengers

737-8
178 passengers

737-7[1]
153 passengers

737-7





Principal characteristics

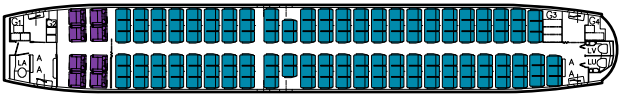
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	66,000 (145,500)	**80,500** (177,500)
Maximum takeoff weight	kg (lb)	65,750 (145,000)	**80,300** (177,000)
Maximum landing weight	kg (lb)	63,900 (140,900)	**66,050** (145,600)
Maximum zero fuel weight	kg (lb)	60,800 (134,000)	**62,900** (138,700)
Fuel capacity	L (US gal)	25,817 (6,820)	**25,817** (6,820)
Cargo volume	m^3 (ft^3)	32.4 (1,146)	**32.4** (1,146)
Design range[2] (passengers, baggage)	km (nmi)	1,740 (940)	**6,830**[4] (3,685)[4]
Fuel consumed[3]	L per 100 pass-km	2.2	**2.2**
Carbon emissions[3]	g CO_2 per pass-km	57	**57**

[1]Highest optional weight
[2]High-density two-class seating (36-, 30-in pitch), full passengers
[3]800-nmi (1,480-km) trip
[4]Fuel volume limited

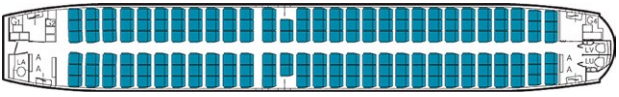
Interior arrangements

High-density two-class (36-, 30-in pitch) 153 passengers

8 first 145 economy

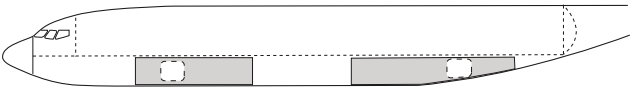


Maximum seating (28-in pitch) 172 passengers



Lower hold

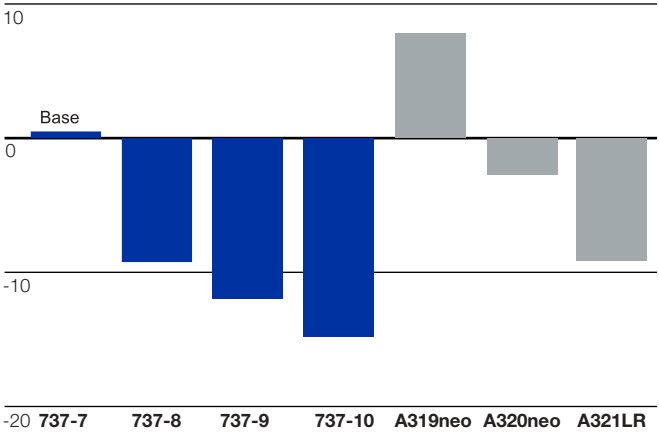
Total volume, 32.4 m^3 (1,146 ft^3) bulk cargo



	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	12.2 m^3 (432 ft^3)	20.2 m^3 (714 ft^3)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 800-nmi (1,480-km) trip
- High-density two-class seating (36-, 30-in pitch)
- A320neo series with CFM engines
- A321LR with three auxiliary fuel tanks

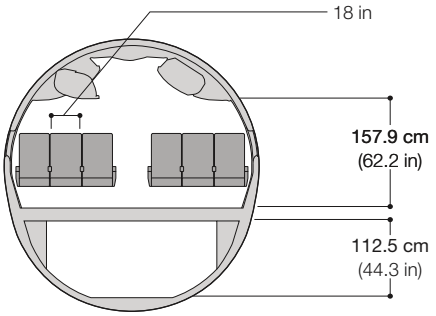
737-7 engine options

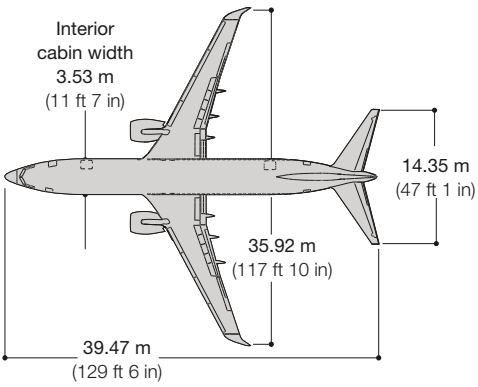
Thrust rating BET, lb[1]

LEAP-1B21	23,000
LEAP-1B23	24,000
LEAP-1B25	25,000
LEAP-1B27	26,400

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

737-8





Principal characteristics

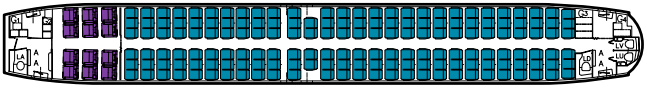
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	72,550 (159,900)	82,850 (182,700)
Maximum takeoff weight	kg (lb)	72,300 (159,400)	82,650 (182,200)
Maximum landing weight	kg (lb)	68,150 (150,300)	69,300 (152,800)
Maximum zero fuel weight	kg (lb)	64,800 (142,900)	65,950 (145,400)
Fuel capacity	L (US gal)	25,817 (6,820)	25,817 (6,820)
Cargo volume	m^3 (ft^3)	43.7 (1,545)	43.7 (1,545)
Design range[2] (passengers, baggage)	km (nmi)	2,490 (1,340)	6,060 (3,270)
Fuel consumed[3]	L per 100 pass-km	2.1	2.1
Carbon emissions[3]	g CO_2 per pass-km	52	52

[1]Highest optional weight
[2]High-density two-class seating (36-, 30-in pitch), full passengers
[3]800-nmi (1,480-km) trip

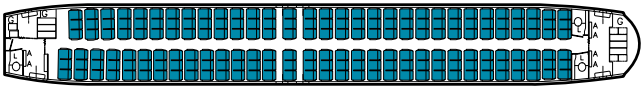
Interior arrangements

High-density two-class (36-, 30-in pitch) 178 passengers

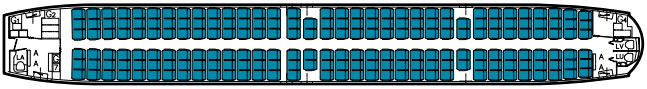
12 first 166 economy



Maximum seating without MED* (30-in pitch) 189 passengers



Maximum seating with MED* (28-in pitch) 200 passengers



* Mid exit door

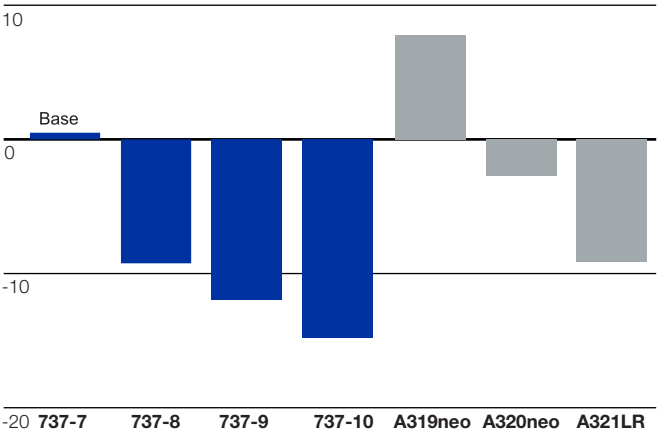
Lower hold

Total volume, 43.7 m³ (1,545 ft³) bulk cargo

	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	18.7 m³ (662 ft³)	25.0 m³ (883 ft³)

Cash airplane-related operating costs

Relative seat-mile cost, %



-20 **737-7** **737-8** **737-9** **737-10** **A319neo** **A320neo** **A321LR**

- Standard rules
- 800-nmi (1,480-km) trip
- High-density two-class seating (36-, 30-in pitch)
- A320neo series with CFM engines
- A321LR with three auxiliary fuel tanks

737-8 engine options

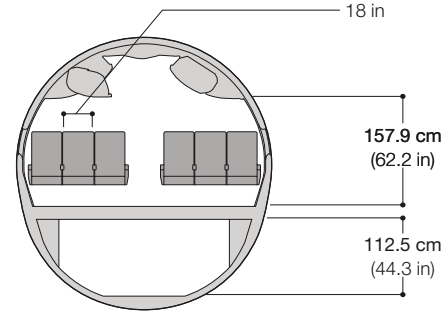
Thrust rating BET, lb[1]

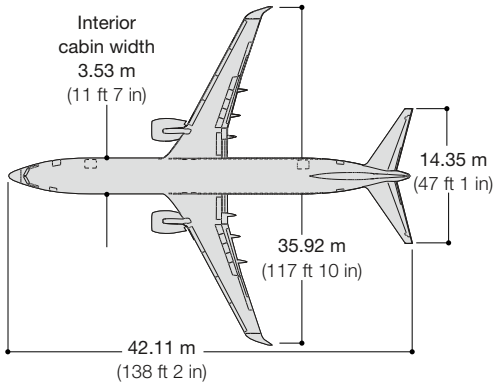
LEAP-1B25	25,000
LEAP-1B27	26,400
LEAP-1B28	27,900
LEAP-1B28B1[2]	27,900

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

[2]High and/or hot thrust bump

737-9





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	76,500 (168,700)	88,550 (195,200)
Maximum takeoff weight	kg (lb)	76,300 (168,200)	88,300 (194,700)
Maximum landing weight	kg (lb)	70,600 (155,700)	74,350 (163,900)
Maximum zero fuel weight	kg (lb)	67,250 (148,300)	71,000 (156,500)
Fuel capacity	L (US gal)	25,817 (6,820)	27,766[4] (7,335[4])
Cargo volume	m^3 (ft^3)	51.4 (1,816)	47.3[4] (1,670[4])
Design range[2] (passengers, baggage)	km (nmi)	2,360 (1,275)	6,050[4] (3,265[4])
Fuel consumed[3]	L per 100 pass-km	2.0	2.0
Carbon emissions[3]	g CO_2 per pass-km	51	51

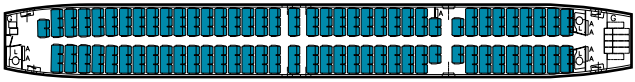
[1]Highest optional weight
[2]High-density two-class seating (36-, 30-inch pitch), full passengers
[3]800-nmi (1,480-km) trip
[4]With one auxiliary tank

Interior arrangements

High-density two-class (36-, 30-in pitch) 193 passengers

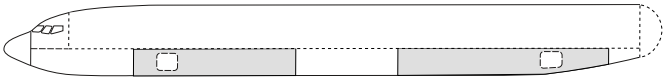
16 first 177 economy

Maximum seating (28-in pitch) 220 passengers



Lower hold

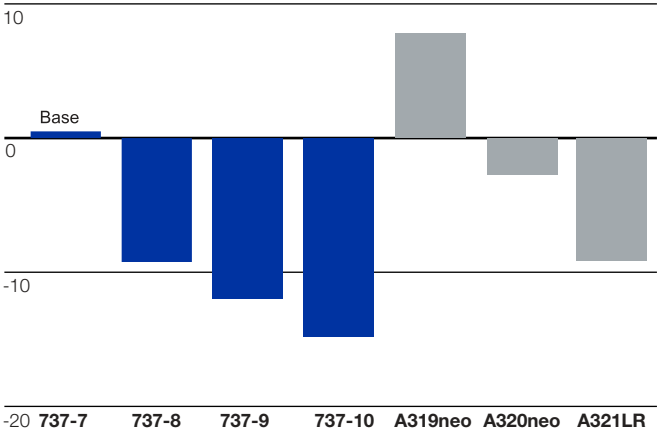
Total volume, 51.4 m³ (1,816 ft³) bulk cargo



	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	23.2 m³ (820 ft³)	28.2 m³ (996 ft³)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 800-nmi (1,480-km) trip
- High-density two-class seating (36-, 30-in pitch)
- A320neo series with CFM engines
- A321LR with three auxiliary fuel tanks

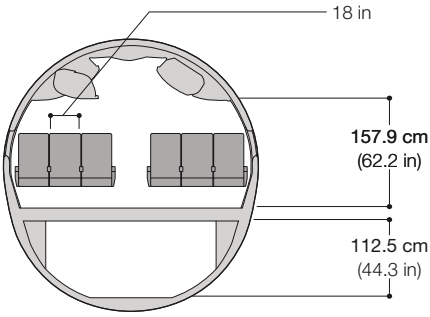
737-9 engine options

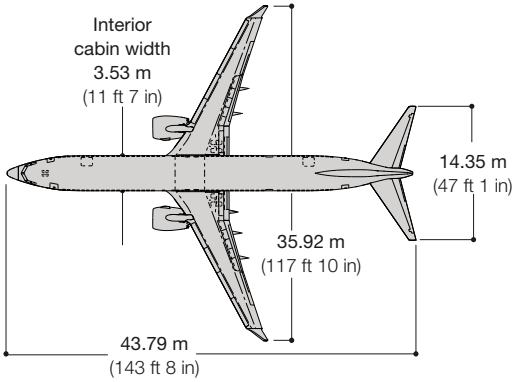
Thrust rating BET, lb[1]

LEAP-1B27	26,400
LEAP-1B28	27,900
LEAP-1B28B1[2]	27,900

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance
[2]High and/or hot thrust bump

737-10





Principal characteristics

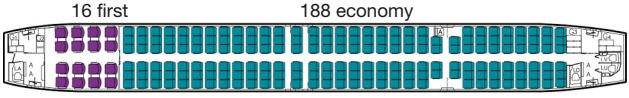
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	79,600 (175,500)	90,000 (198,400)
Maximum takeoff weight	kg (lb)	79,400 (175,000)	89,750 (197,900)
Maximum landing weight	kg (lb)	73,150 (161,300)	75,950 (167,400)
Maximum zero fuel weight	kg (lb)	69,800 (153,900)	72,550 (160,000)
Fuel capacity	L (US gal)	25,817 (6,820)	25,817 (6,820)
Cargo volume	m^3 (ft^3)	55.5 (1,961)	55.5 (1,961)
Design range[2] (passengers, baggage)	km (nmi)	2,440 (1,315)	5,680 (3,065)[4]
Fuel consumed[3]	L per 100 pass-km	2.0	2.0
Carbon emissions[3]	g CO_2 per pass-km	50	50

[1]Highest optional weight
[2]High-density two-class seating (36-, 30-inch pitch), full passengers
[3]800-nmi (1,480-km) trip
[4]Fuel volume limited

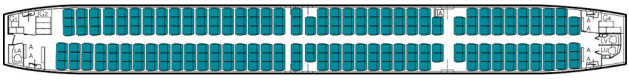
Interior arrangements

High-density two-class (36-, 30-in pitch) 204 passengers

16 first 188 economy

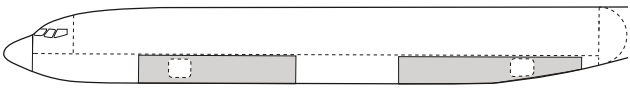


Maximum seating (28-in pitch) 230 passengers



Lower hold

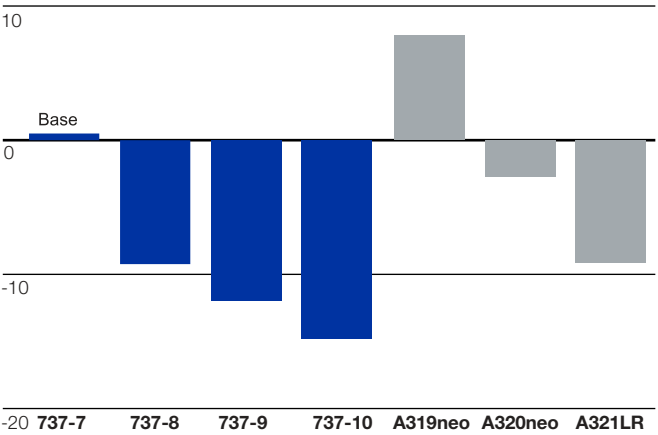
Total volume, 55.5 m^3 (1,961 ft^3) bulk cargo



	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	25.8 m^3 (911 ft^3)	29.7 m^3 (1,050 ft^3)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 800-nmi (1,480-km) trip
- High-density two-class seating (36-, 30-in pitch)
- A320neo series with CFM engines
- A321LR with three auxiliary fuel tanks

737-10 engine options

Thrust rating BET, lb[1]

LEAP-1B27	26,400
LEAP-1B28	27,900
LEAP-1B28B1[2]	27,900

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance
[2]High and/or hot thrust bump

Short- to medium-range market

737-700/-800/-900ER

The Next-Generation 737 family builds on the success of the 737 Classics, adding range, a modern passenger cabin design, and lower operating economics.

One airplane in three sizes, the Next-Generation 737 is available with advanced technology features such as head-up display, GPS landing system, vertical situation display, and a required navigation performance capability of 0.1 nautical miles.

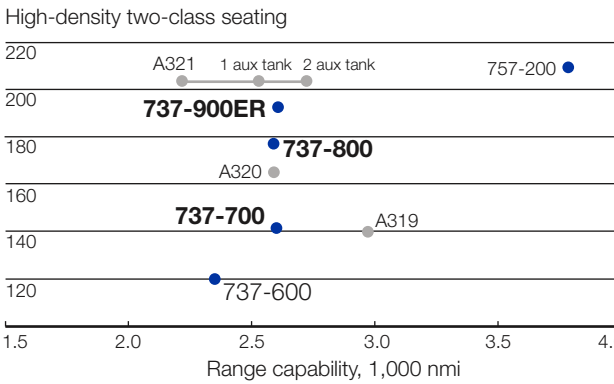
The flexible Next-Generation 737 boasts demonstrated success in the low-cost, network, extended operation, charter, startup airline, and business jet markets.

A new wing design increases aerodynamic efficiency, fuel capacity, and speed. Optional blended winglets further improve fuel consumption, increase range, and reduce noise.

Sharing the same type rating, engine, ground-handling and support equipment, and airframe spares across the entire family, the 737-700/-800/-900ER are significantly more economical to maintain and more efficient to operate compared with the competition.

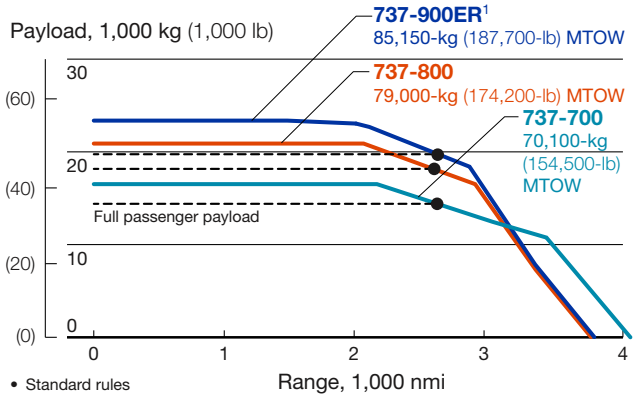
The Next-Generation 737 airplanes, like the Classics before them, are renowned for their industry-leading schedule reliability. No matter how you look at it, the 737 means business.

Next-Generation 737 family—one airplane in three sizes to best meet market demands



- 737NG with optional winglets
- 757 with optional winglets
- A320 series with optional winglets
- 3% fuel factor

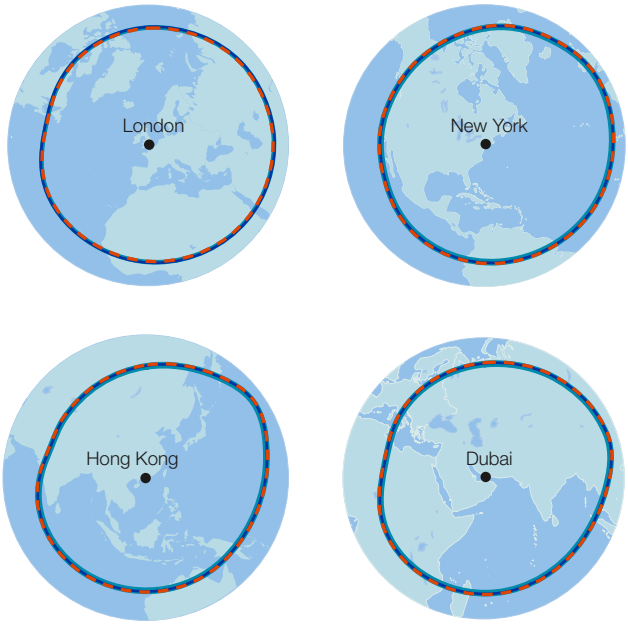
Payload-range capability



- Standard rules
- High-density two-class seating
- With optional winglets
- 3% fuel factor

[1]With one optional auxiliary fuel tank

Range capability from



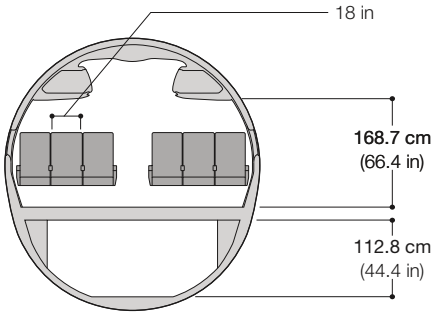
- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- With optional winglets
- High-density two-class seating
- 737-900ER includes one auxiliary fuel tank
- 3% fuel factor

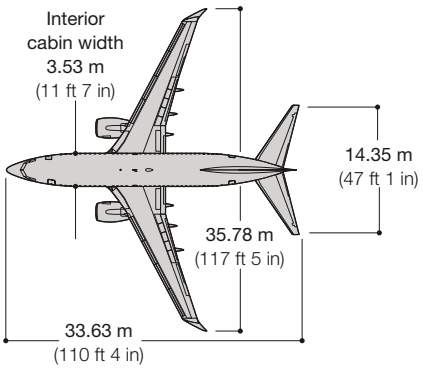
737-900ER
193 passengers

737-800
178 passengers

737-700
141 passengers

737-700 out of production





Principal characteristics

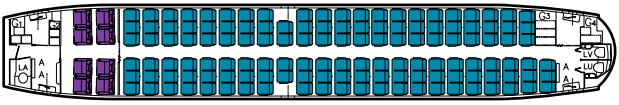
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	60,550 (133,500)	**70,300** (155,000)
Maximum takeoff weight	kg (lb)	60,350 (133,000)	**70,100** (154,500)
Maximum landing weight	kg (lb)	58,050 (128,000)	**58,600** (129,200)
Maximum zero fuel weight	kg (lb)	54,650 (120,500)	**55,200** (121,700)
Fuel capacity	L (US gal)	26,025 (6,875)	**26,025** (6,875)
Cargo volume	m^3 (ft^3)	27.1 (956)	**27.1** (956)
Design range[2,3] (passengers, baggage)	km (nmi)	1,500 (810)	**4,820** (2,600)
Fuel consumed[4]	L per 100 pass-km	2.8	**2.7**
Carbon emissions[4]	g CO_2 per pass-km	70	**70**

• 3% fuel factor
[1]Highest optional weight
[2]With optional winglets
[3]High-density two-class seating (36-, 30-in pitch), full passengers
[4]800-nmi (1,480-km) trip

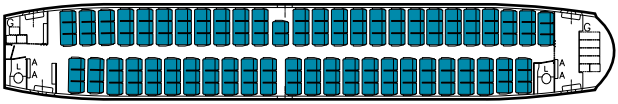
Interior arrangements

High-density two-class (36-, 30-in pitch) 141 passengers

8 first 133 economy

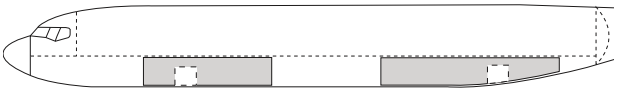


Maximum seating (30-in pitch) 149 passengers



Lower hold

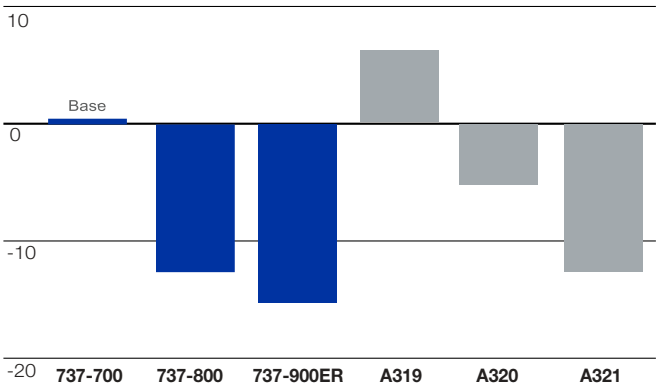
Total volume, 27.1 m^3 (956 ft^3) bulk cargo



	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	10.6m^3 (376 ft^3)	16.4 m^3 (580 ft^3)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 800-nmi (1,480-km) trip
- High-density two-class seating (36-, 30-in pitch)
- With optional winglets
- A321 with one optional auxiliary fuel tank
- 3% fuel factor

737-700 engine options

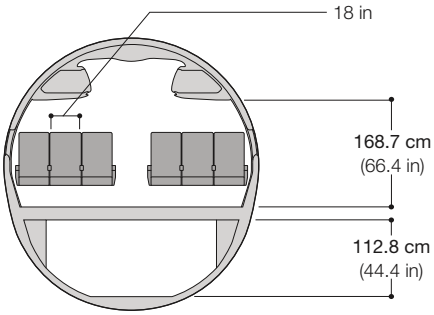
Thrust rating BET, lb[1]

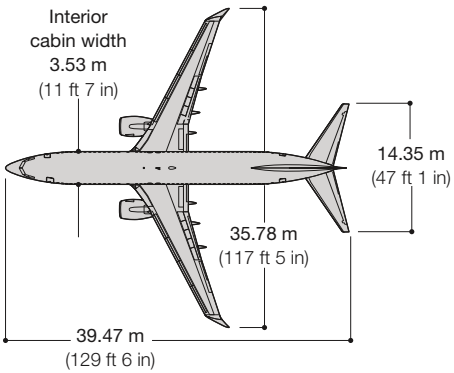
CFM56-7B20	19,700
CFM56-7B22	22,000
CFM56-7B24	23,700
CFM56-7B26/B2[2]	23,700
CFM56-7B26	26,100

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

[2]The default takeoff BET for this rating is 23,700 lb; the thrust bump level provides a BET of 26,100 lb of thrust when operating at higher altitudes

737-800 out of production





Principal characteristics

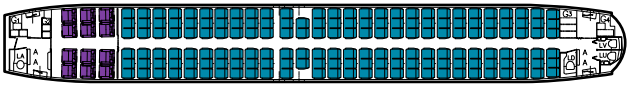
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	70,750 (156,000)	79,250 (174,700)
Maximum takeoff weight	kg (lb)	70,550 (155,500)	79,000 (174,200)
Maximum landing weight	kg (lb)	65,300 (144,000)	66,350 (146,300)
Maximum zero fuel weight	kg (lb)	61,700 (136,000)	62,750 (138,300)
Fuel capacity	L (US gal)	26,025 (6,875)	26,025 (6,875)
Cargo volume	m^3 (ft^3)	44.0 (1,555)	44.0 (1,555)
Design range[2,3] (passengers, baggage)	km (nmi)	2,310 (1,250)	4,790 (2,585)
Fuel consumed[4]	L per 100 pass-km	2.4	2.4
Carbon emissions[4]	g CO_2 per pass-km	62	62

• 3% fuel factor
[1]Highest optional weight
[2]With optional winglets
[3]High-density two-class seating (36-, 30-inch pitch), full passengers
[4]800-nmi (1,480-km) trip

Interior arrangements

High-density two-class (36-, 30-in pitch) 178 passengers

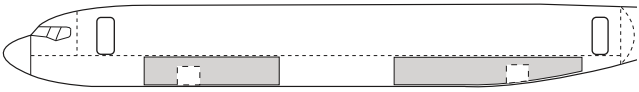
12 first 166 economy



Maximum seating (30-in pitch) 189 passengers

Lower hold

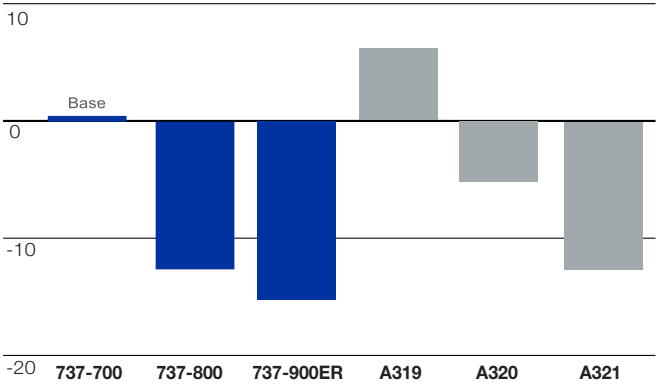
Total volume, 44.0 m³ (1,555 ft³) bulk cargo



	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	19.0 m³ (672 ft³)	25.0 m³ (883 ft³)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 800-nmi (1,480-km) trip
- High-density two-class seating (36-, 30-in pitch)
- With optional winglets
- A321 with one optional auxiliary fuel tank
- 3% fuel factor

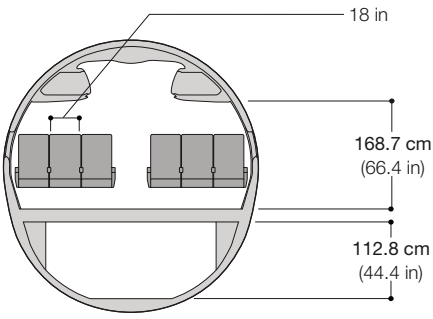
737-800 engine options

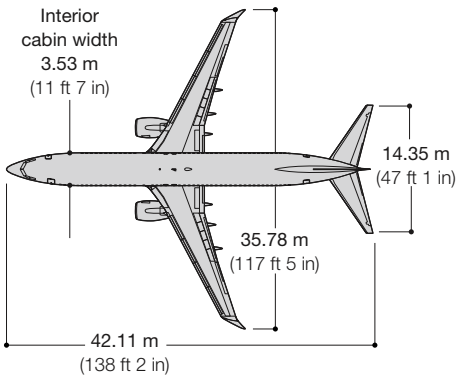
Thrust rating BET, lb[1]

CFM56-7B24	23,700
CFM56-7B26	26,100
CFM56-7B27	27,100
CFM56-7B27/B1[2]	28,400

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance
[2]High and/or hot thrust bump

737-900ER out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	74,600 (164,500)	**85,350** (188,200)
Maximum takeoff weight	kg (lb)	74,400 (164,000)	**85,150** (187,700)
Maximum landing weight	kg (lb)	67,700 (149,300)	**71,350** (157,300)
Maximum zero fuel weight	kg (lb)	64,100 (141,300)	**67,700** (149,300)
Fuel capacity	L (US gal)	26,025 (6,875)	**26,025** (6,875)
Cargo volume	m^3 (ft^3)	51.6 (1,824)	**51.6** (1,824)
Design range[2,3] (passengers, baggage)	km (nmi)	2,130 (1,150)	**4,820** (2,600)[5]
Fuel consumed[4]	L per 100 pass-km	2.4	**2.4**
Carbon emissions[4]	g CO_2 per pass-km	61	**61**

• 3% fuel factor

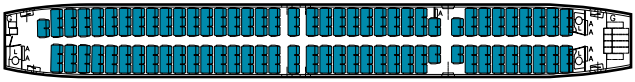
[1]Highest optional weight
[2]With optional winglets
[3]High-density two-class seating (36-, 30-inch pitch), full passengers
[4]800-nmi (1,480-km) trip
[5]Fuel volume limited

Interior arrangements

High-density two-class (36-, 30-in pitch) 193 passengers

16 first 177 economy

Maximum seating (28-in pitch) 220 passengers



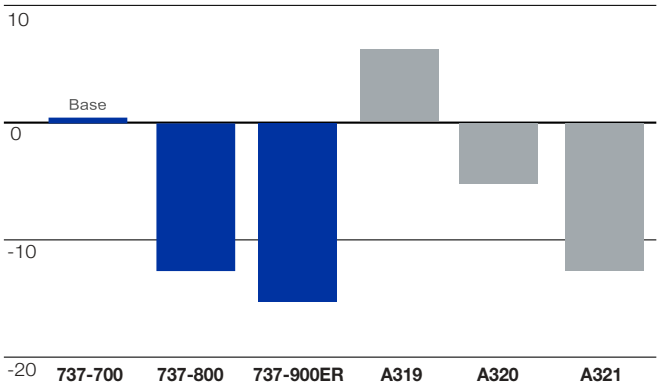
Lower hold

Total volume, 51.6 m^3 (1,824 ft^3) bulk cargo

	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	23.4 m^3 (825 ft^3)	28.2 m^3 (999 ft^3)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 800-nmi (1,480-km) trip
- High-density two-class seating (36-, 30-in pitch)
- With optional winglets
- A321 with one optional auxiliary fuel tank
- 3% fuel factor

737-900ER engine options

Thrust rating BET, lb[1]

CFM56-7B26	26,100
CFM56-7B27	27,100
CFM56-7B27/B1[2]	28,400

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

[2]High and/or hot thrust bump

Short- to medium-range market

737-300/-400/-500
(out-of-production airplanes)

From the outset, we built the 737 with a simple design for a single purpose—to earn revenue in markets where competitive fares and convenient schedules are key to passenger satisfaction.

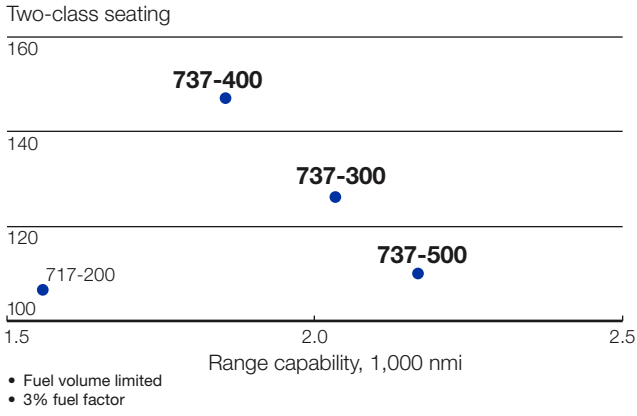
The straightforward design of the 737 family simplifies operations so 737s can work harder, work longer, and meet schedules more reliably than competing airplanes. Operators rely on the 737 family to deliver nearly 24 hours of utilization, day after day.

A family of three jetliners with a lot in common, the 737-300, -400, and -500 share the same flight crew rating, maintenance support, and training plans as other members of the family. Training and maintenance are simple, efficient, and cost-effective.

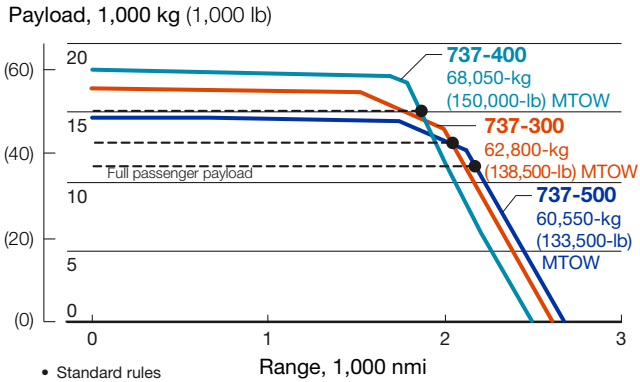
The 737-300, -400, and -500 give operators the flexibility to match capacity to passenger demand in variable and directional markets. Flexibility, economics, reliability, and passenger satisfaction helped the 737 Classics win an impressive sales record that was unsurpassed when the airplane family was still in production.

Simple and flexible, the 737-300, -400, and -500 can operate in any market.

737-300, -400, and -500—one airplane in three sizes to best meet market demands

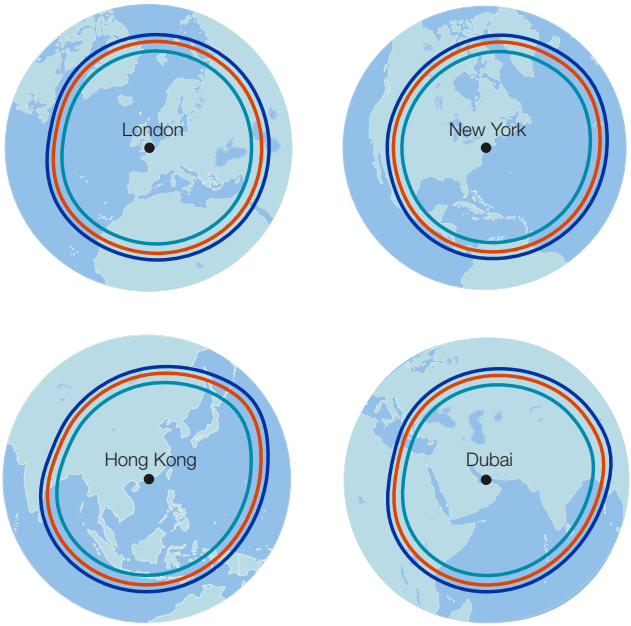


Payload-range capability



- Standard rules
- Two-class seating
- Fuel volume limited
- 3% fuel factor

Range capability from



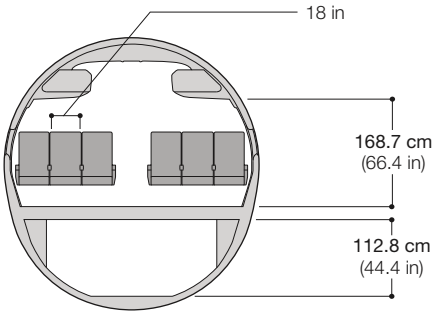
- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- Fuel volume limited
- 3% fuel factor

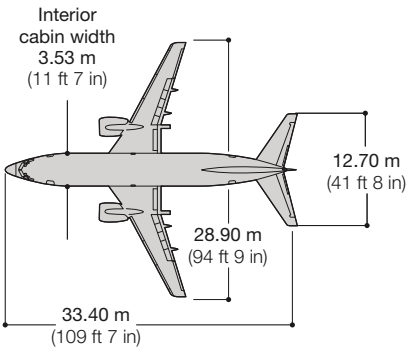
737-400
147 passengers

737-300
126 passengers

737-500
110 passengers

737-300 out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	56,700 (125,000)	63,050 (139,000)
Maximum takeoff weight	kg (lb)	56,450 (124,500)	62,800 (138,500)
Maximum landing weight	kg (lb)	51,700 (114,000)	52,900 (116,600)
Maximum zero fuel weight	kg (lb)	47,650 (105,000)	49,700 (109,600)
Fuel capacity	L (US gal)	20,104 (5,311)	20,104 (5,311)
Cargo volume	m^3 (ft^3)	30.2 (1,068)	30.2 (1,068)
Design range (passengers, baggage)	km (nmi)	2,270 (1,225)	3,770 (2,035)[2]
Fuel consumed[3]	L per 100 pass-km	3.5	3.5
Carbon emissions[3]	g CO_2 per pass-km	88	88

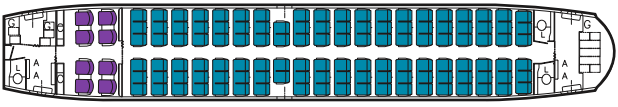
• 3% fuel factor

[1]Highest optional weight
[2]Fuel volume limited
[3]800-nmi (1,480-km) trip

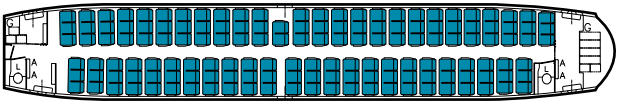
Interior arrangements

Two-class (36-, 32-in pitch) 126 passengers

8 first 118 economy



Maximum seating (30-in pitch) 149 passengers

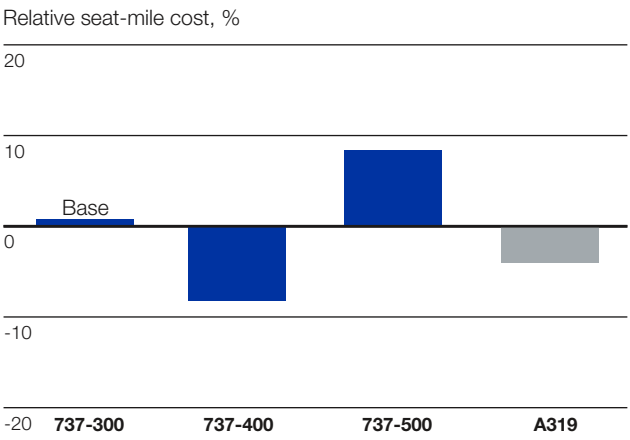


Lower hold

Total volume, 30.2 m³ (1,068 ft³) bulk cargo

	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	12.0 m³ (425 ft³)	18.2 m³ (643 ft³)

Cash airplane-related operating costs



- Standard rules
- 800-nmi (1,480-km) trip
- Two-class seating (36-, 32-in pitch)
- A319 with optional winglets
- 3% fuel factor

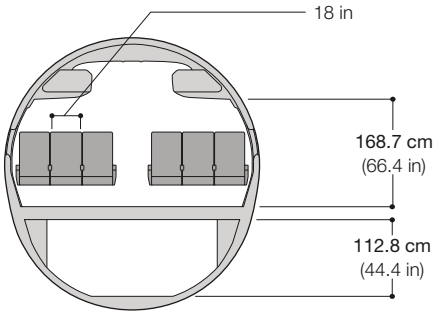
737-300 engine options

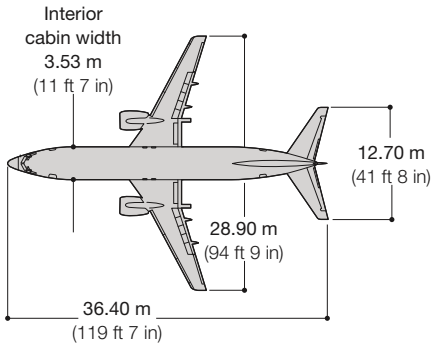
Thrust rating BET, lb[1]

CFM56-3C-1	19,600 to 22,000

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

737-400 out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	63,050 (139,000)	68,250 (150,500)
Maximum takeoff weight	kg (lb)	62,800 (138,500)	68,050 (150,000)
Maximum landing weight	kg (lb)	54,900 (121,000)	56,250 (124,000)
Maximum zero fuel weight	kg (lb)	51,250 (113,000)	53,050 (117,000)
Fuel capacity	L (US gal)	20,104 (5,311)	20,104 (5,311)
Cargo volume	m^3 (ft^3)	38.9 (1,373)	38.9 (1,373)
Design range (passengers, baggage)	km (nmi)	2,700 (1,460)	3,440 (1,855)[2]
Fuel consumed[3]	L per 100 pass-km	3.2	3.2
Carbon emissions[3]	g CO_2 per pass-km	81	82

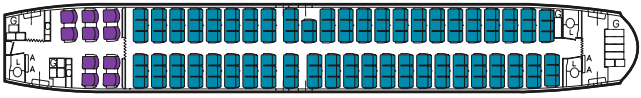
• 3% fuel factor

[1]Highest optional weight
[2]Fuel volume limited
[3]800-nmi (1,480-km) trip

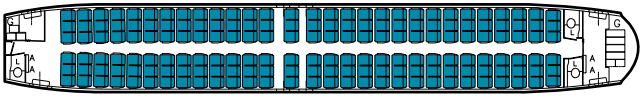
Interior arrangements

Two-class (36-, 32-in pitch) 147 passengers

10 first 137 economy

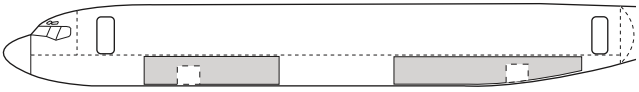


Maximum seating (29-in pitch) 174 passengers



Lower hold

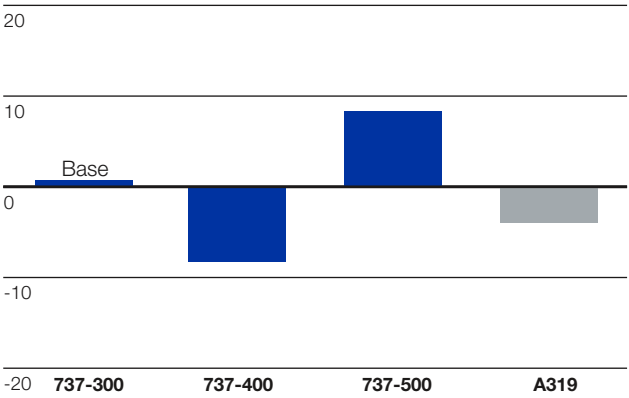
Total volume, 38.9 m³ (1,373 ft³) bulk cargo



	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	17.2 m³ (607 ft³)	21.7 m³ (766 ft³)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 800-nmi (1,480-km) trip
- Two-class seating (36-, 32-in pitch)
- A319 with optional winglets
- 3% fuel factor

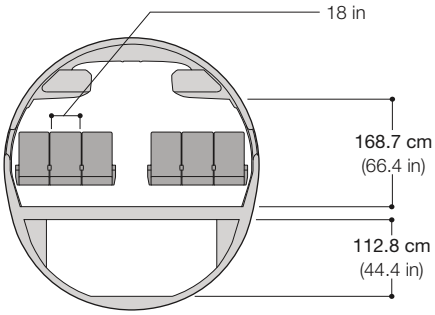
737-400 engine options

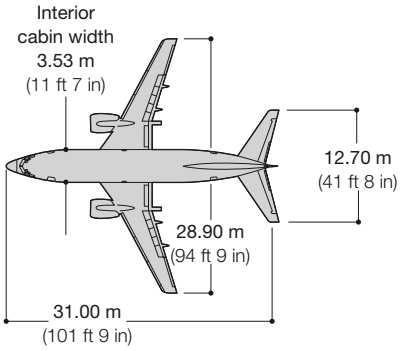
Thrust rating BET, lb[1]

CFM56-3C-1	22,000 to 23,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

737-500 out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	52,600 (116,000)	60,800 (134,000)
Maximum takeoff weight	kg (lb)	52,400 (115,500)	60,550 (133,500)
Maximum landing weight	kg (lb)	49,900 (110,000)	49,900 (110,000)
Maximum zero fuel weight	kg (lb)	46,500 (102,500)	46,700 (103,000)
Fuel capacity	L (US gal)	20,104 (5,311)	20,104 (5,311)
Cargo volume	m^3 (ft^3)	23.3 (822)	23.3 (822)
Design range (passengers, baggage)	km (nmi)	1,930 (1,040)	4,010 (2,165)[2]
Fuel consumed[3]	L per 100 pass-km	3.8	3.8
Carbon emissions[3]	g CO_2 per pass-km	96	96

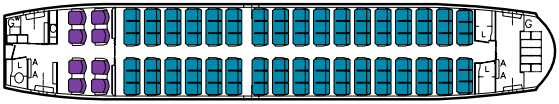
• 3% fuel factor

[1]Highest optional weight
[2]Fuel volume limited
[3]800-nmi (1,480-km) trip

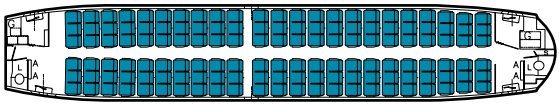
Interior arrangements

Two-class (36-, 32-in pitch) 110 passengers

8 first 102 economy

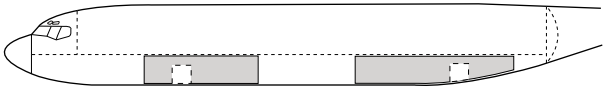


Maximum seating (29-in pitch) 138 passengers



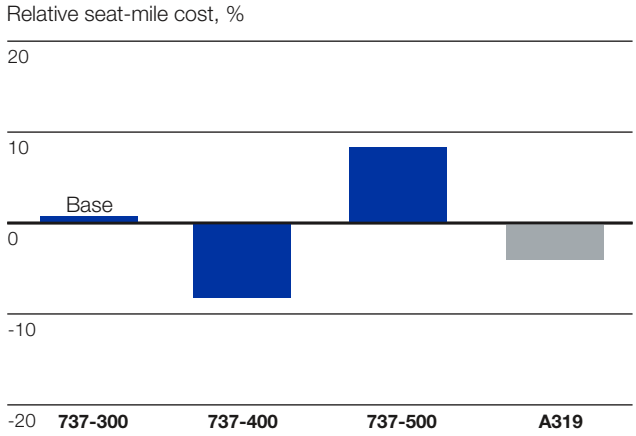
Lower hold

Total volume, 23.3 m^3 (822 ft^3) bulk cargo



	Forward	Aft
Door	89 x 122 cm (35 x 48 in)	84 x 122 cm (33 x 48 in)
Volume	8.1 m^3 (287 ft^3)	15.2 m^3 (535 ft^3)

Cash airplane-related operating costs



- Standard rules
- 800-nmi (1,480-km) trip
- Two-class seating (36-, 32-in pitch)
- A319 with optional winglets
- 3% fuel factor

737-500 engine options

Thrust rating BET, lb[1]

CFM56-3C-1	18,000 to 19,600

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Regional market

717-200
(out-of-production airplanes)

The 717 is a tough airplane, built to fly short-haul, high-frequency missions in the growing 100-seat market. It doesn't need long runways or big-hub facilities to serve its routes.

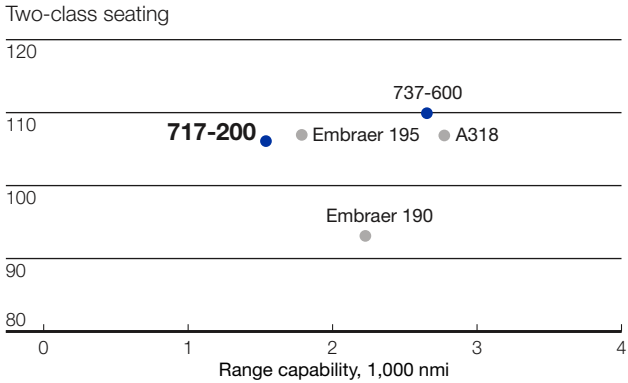
Hub and spoke and point to point, the 717 can handle any combination of routes, including those of secondary cities. It can handle emerging regional markets and, in established markets, the 717 can replace less-efficient 100-seaters. It's at home in all the short-range markets of the world.

Its spacious interior makes the 717 extremely comfortable, and its large stowage bins are especially attractive to passengers. It's a small airplane that provides big-jet comfort.

The engine on the 717 produces ample thrust for strong takeoff and has the power and speed to deliver passengers to their destinations more quickly than the competition. The wing has demonstrated performance in short-range operations and has the strength to handle frequent takeoffs and landings.

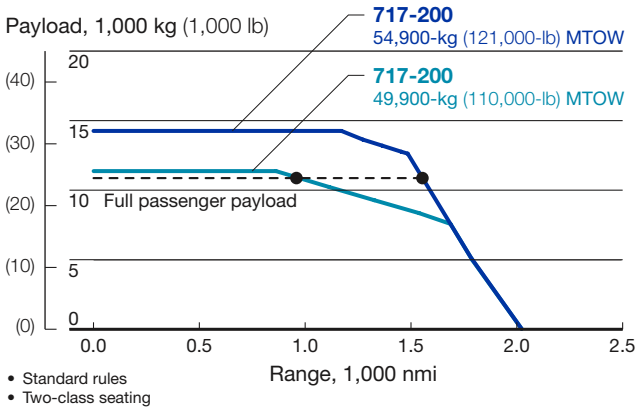
The effective use of technology in the 717 translates into lower operating costs. With its exceptionally low trip costs, the 717 provides an opportunity for operators to explore new markets with little risk.

717—serves the regional market



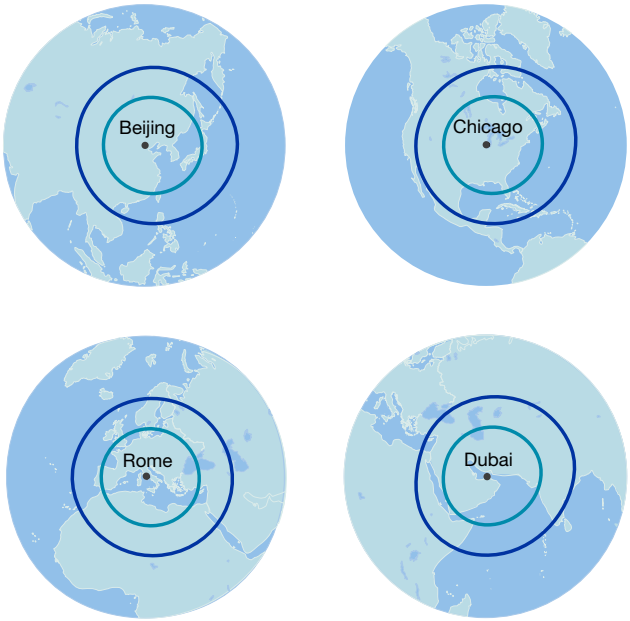
- Standard rules
- A318 with optional winglets
- 3% fuel factor

Payload-range capability



- Standard rules
- Two-class seating
- 3% fuel factor

Range capability from



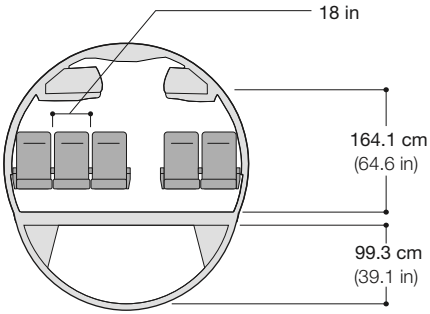
- Full passenger payload
- Standard rules
- Two-class seating
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

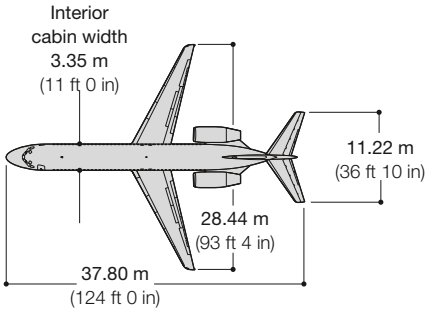
[1]Highest optional weight
[2]Fuel volume limited

717-200[1, 2]
106 passengers

717-200
106 passengers

717-200 out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	50,350 (111,000)	55,350 (122,000)
Maximum takeoff weight	kg (lb)	49,900 (110,000)	54,900 (121,000)
Maximum landing weight	kg (lb)	45,350 (100,000)	49,900 (110,000)
Maximum zero fuel weight	kg (lb)	42,650 (94,000)	45,600 (100,500)
Fuel capacity	L (US gal)	13,904 (3,673)	13,904 (3,673)
Cargo volume	m^3 (ft^3)	26.5 (935)	26.5 (935)
Design range (passengers, baggage)	km (nmi)	1,790 (965)	2,880 (1,555)[2]
Fuel consumed[3]	L per 100 pass-km	3.8	3.8
Carbon emissions[3]	g CO_2 per pass-km	97	97

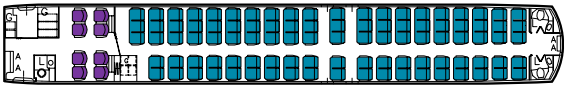
• 3% fuel factor

[1]Highest optional weight
[2]Fuel volume limited
[3]500-nmi (925-km) trip

Interior arrangements

Two-class (36-, 32-in pitch) 106 passengers

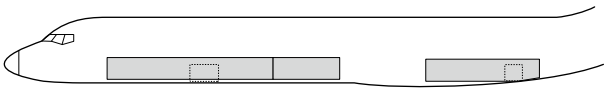
8 first 98 economy



Maximum seating (28-in pitch) 134 passengers

Lower hold

Total volume, 26.5 m^3 (935 ft^3) bulk cargo



	Forward	Aft
Volume	18.3 m^3 (646 ft^3)	8.2 m^3 (289 ft^3)

717-200 engine options

Thrust rating BET, lb[1]	
BR700-715	18,500 to 21,000

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Medium-range market

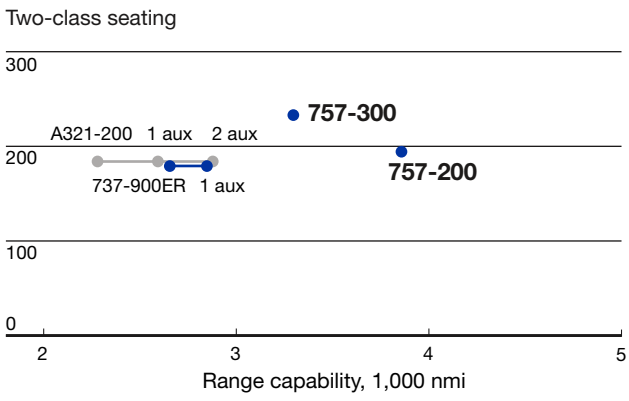
757 family
(out-of-production airplanes)

The 757-200 and 757-300 are reliable, versatile, fuel-efficient, and environmentally responsible airplanes. Their efficient operation and excellent economics mean that they are profitable on high-frequency routes and in fragmenting markets around the world.

The 757-200 has the versatility to serve long-haul markets up to nearly 4,000 nautical miles (7,804 kilometers) while maintaining low seat-mile costs. It handles short and high fields easily, making it able to serve airports usually served only by much smaller airplanes.

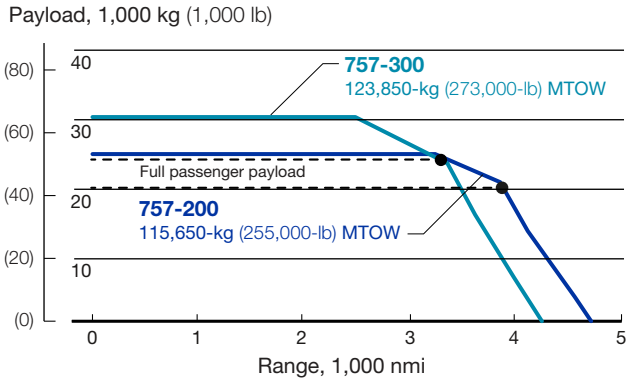
The 757-300—a stretch version of the 757-200—builds on the strengths of the 757-200 and provides lower cost per seat-mile. The cash seat-mile costs of the 757-300 are lower than those of the competition.

757 family—versatile for short- and medium-haul markets



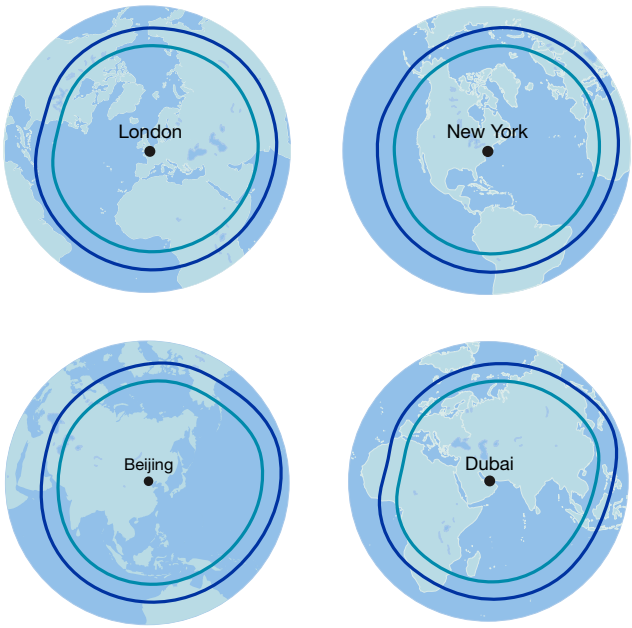
- Standard mission rules
- With optional winglets
- 3% fuel factor

Payload-range capability



- Standard rules
- Two-class interiors
- 3% fuel factor

Range capability from



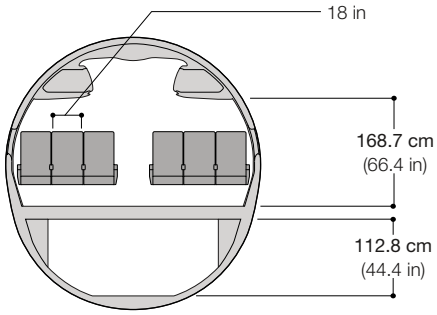
- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

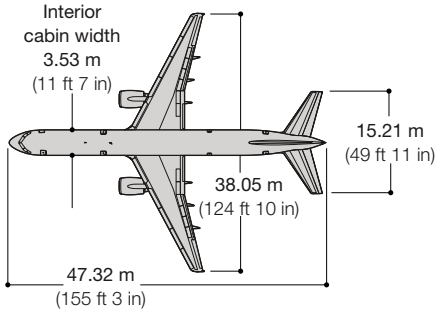
[1]Fuel volume limited

757-300
234 passengers

757-200[1]
195 passengers

757-200 out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	100,250 (221,000)	116,100 (256,000)
Maximum takeoff weight	kg (lb)	99,800 (220,000)	115,650 (255,000)
Maximum landing weight	kg (lb)	89,800 (198,000)	95,250 (210,000)
Maximum zero fuel weight	kg (lb)	84,100 (185,400)	85,000 (187,400)
Fuel capacity	L (US gal)	43,453 (11,479)	43,453 (11,479)
Cargo volume	m^3 (ft^3)	47.3 (1,670)	47.3 (1,670)
Design range (passengers, baggage)	km (nmi)	3,820 (2,060)[3,4]	7,160 (3,865)[3,4]
Fuel consumed[2]	L per 100 pass-km	2.7	2.7
Carbon emissions[2]	g CO_2 per pass-km	69	69

• 3% fuel factor
[1]Highest optional weight
[2]1,000-nmi (1,850-km) trip
[3]With optional winglets
[4]Fuel volume limited

Interior arrangements

Two-class, 36-, 32-in pitch 195 passengers, overwing exits

16 first 179 economy

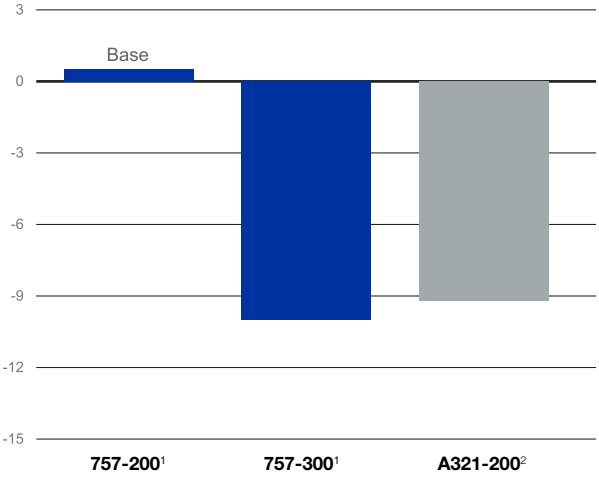
Lower hold

Total volume, 47.3 m³ (1,670 ft³) bulk cargo

	Forward	Aft
Bulk volume	19.8 m³ (699 ft³)	27.5 m³ (971 ft³)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 1,000-nmi (1,850-km) trip
- Two-class seating
- 3% fuel factor

[1]With optional winglets
[2]With optional winglets and two optional fuel tanks

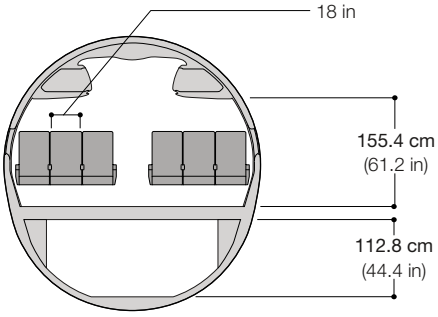
757-200 engine options

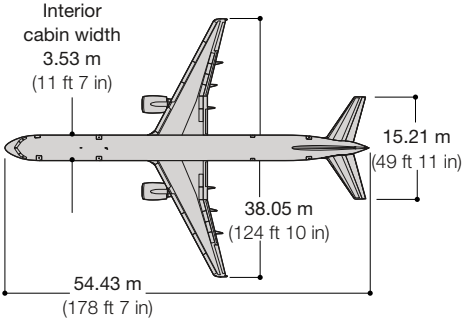
Thrust rating BET, lb[1]

Pratt & Whitney	
PW2037	36,600
PW2040	40,100
Rolls-Royce	
RB211-535E4	40,200
RB211-535E4-B	43,500

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

757-300 out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	109,300 (241,000)	124,050 (273,500)
Maximum takeoff weight	kg (lb)	108,850 (240,000)	123,850 (273,000)
Maximum landing weight	kg (lb)	101,600 (224,000)	101,600 (224,000)
Maximum zero fuel weight	kg (lb)	95,250 (210,000)	95,950 (211,600)
Fuel capacity	L (US gal)	43,366 (11,456)	43,366 (11,456)
Cargo volume	m^3 (ft^3)	67.1 (2,370)	67.1 (2,370)
Design range (passengers, baggage)	km (nmi)	3,170 (1,710)[3]	6,110 (3,295)[3]
Fuel consumed[2]	L per 100 pass-km	2.5	2.5
Carbon emissions[2]	g CO_2 per pass-km	65	65

• 3% fuel factor

[1]Highest optional weight
[2]1,000-nmi (1,850-km) trip
[3]With optional winglets

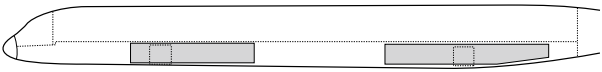
Interior arrangements

Two-class (36-, 32-in pitch) 234 passengers

24 first 210 economy

Lower hold

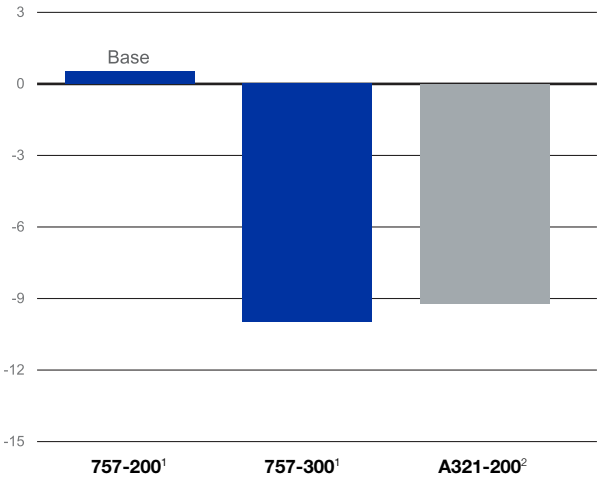
Total volume, 67.1 m³ (2,370 ft³) bulk cargo



	Forward	Aft
Bulk volume	30.3 m³ (1,071 ft³)	36.8 m³ (1,299 ft³)

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 1,000-nmi (1,850-km) trip
- Two-class seating
- 3% fuel factor

[1]With optional winglets
[2]With optional winglets and two optional fuel tanks

757-300 engine options

Thrust rating BET, lb[1]

Pratt & Whitney	
PW2040	40,100
PW2043	42,600
Rolls-Royce	
RB211-535E4	40,200
RB211-535E4-B	43,500

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Medium-range market

767 family

The 767 has proven range, profitability, and reliability—and a well-deserved reputation for providing outstanding value to operators and investors alike.

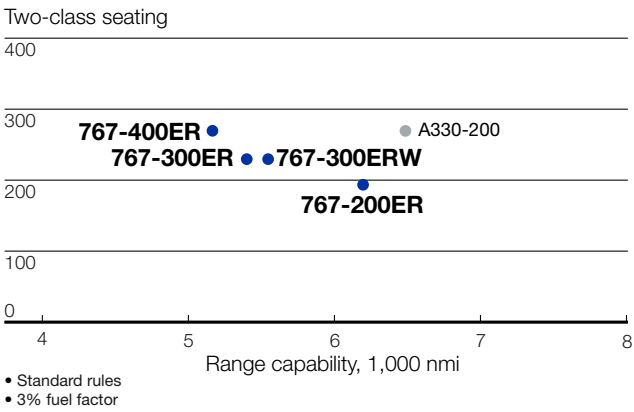
The 767-300ER, with 229 seats, combines low seat-mile costs and strong performance, making it an excellent choice for regional, domestic, and intercontinental flights.

The 767 has amazing passenger appeal. The 767 signature interior is styled after the award-winning 777—offering big stowage bins, which make it easier to store carry-on luggage, and contoured walls and ceilings, which give passengers an unparalleled sense of spaciousness. The 767 also has the highest percentage of window and aisle seats of any aircraft on the market.

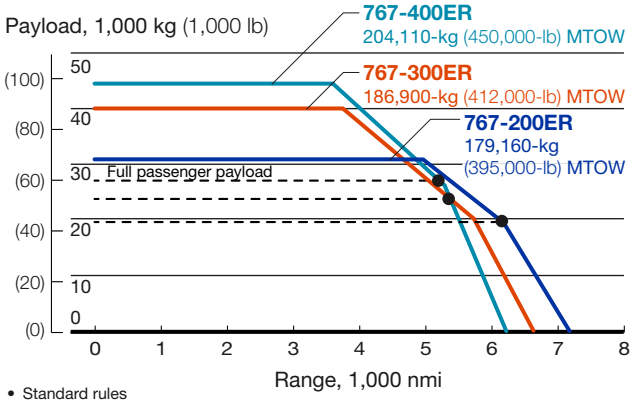
Thanks to engine-airframe integration and overall structural efficiency, the 767 continues to be an economically efficient airplane. The empty weight is lighter than that of the competition of comparable size, which translates into seat-mile and trip costs that are significantly lower than those of the competition.

The 757 and 767 have an FAA related type rating and EASA same type rating.

767 family—proven performance in the small twin-aisle market

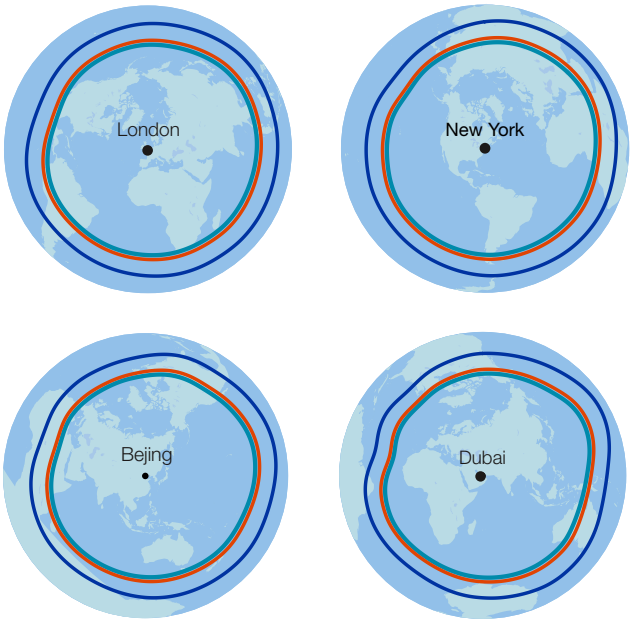


Payload-range capability



- Standard rules
- Nominal performance
- Two-class seating
- 3% fuel factor

Range capability from



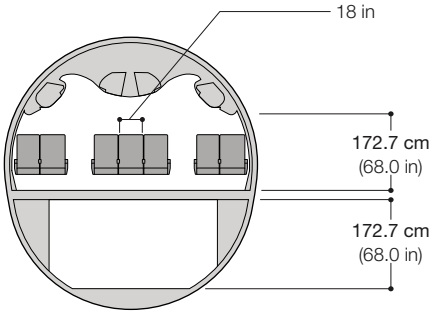
- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

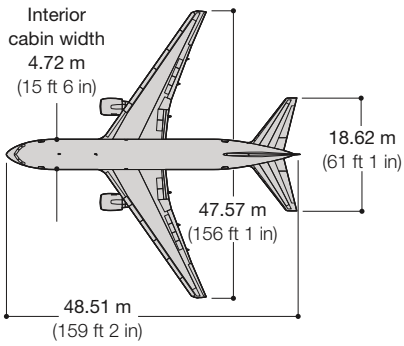
767-400ER
267 passengers

767-300ER
229 passengers

767-200ER
192 passengers

767-200ER out of production





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	157,390 (347,000)	179,620 (396,000)
Maximum takeoff weight	kg (lb)	156,480 (345,000)	179,160 (395,000)
Maximum landing weight	kg (lb)	126,090 (278,000)	136,070 (300,000)
Maximum zero fuel weight	kg (lb)	114,750 (253,000)	117,930 (260,000)
Fuel capacity	L (US gal)	90,770 (23,980)	90,770 (23,980)
Cargo volume[2]	m^3 (ft^3)	82.9 (2,925)	82.9 (2,925)
Design range (passengers, baggage)	km (nmi)	8,180 (4,420)	11,475 (6,195)
Fuel consumed[3]	L per 100 pass-km	3.3	3.3
Carbon emissions[3]	g CO_2 per pass-km	85	85

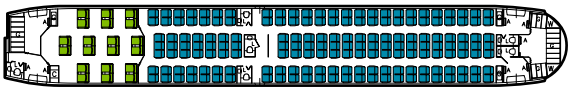
• 3% fuel factor

[1]Highest optional weight
[2]3 96- x 125-in pallets and 10 LD-2 containers, plus bulk
[3]3,000-nmi (5,555-km) trip

Interior arrangements

Two-class, 60-, 32-in pitch 192 passengers

20 business 172 economy



Lower hold

Total volume, 82.9 m^3 (2,925 ft^3)[1]

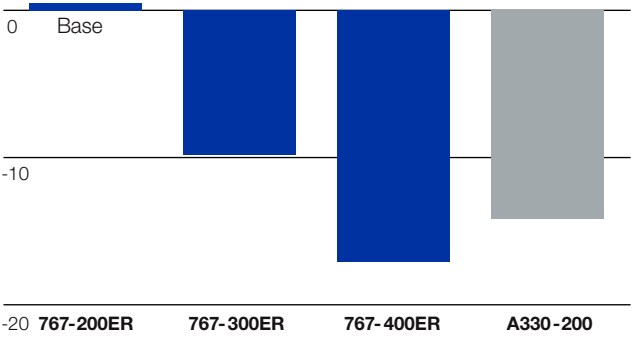
	Forward	Aft
Volume	35.3 m^3 (1,245 ft^3)	35.4 m^3 (1,250 ft^3)
	3 96- x 125-in pallets	10 LD-2s

- The 767-200ER has 12.2 m^3 (430 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 3,000-nmi (5,555-km) trip
- Two-class seating
- 3% fuel factor

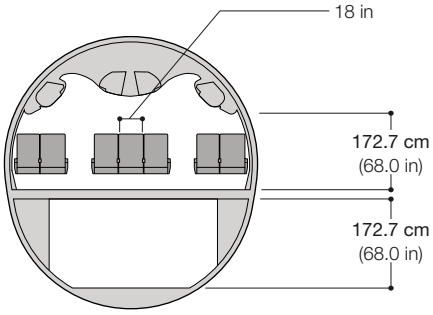
767-200ER engine options

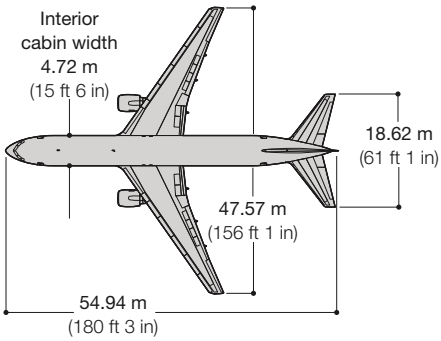
Thrust rating BET, lb[1]

General Electric	
CF6-80C2B6F	60,200
CF6-80C2B7F	62,100
Pratt & Whitney	
PW4052	52,300
PW4056	57,100
PW4060	60,200

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

767-300ER





Principal characteristics

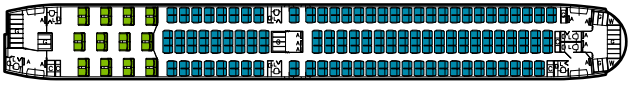
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	172,800 (381,000)	187,350 (413,000)
Maximum takeoff weight	kg (lb)	172,350 (380,000)	186,900 (412,000)
Maximum landing weight	kg (lb)	136,100 (300,000)	145,150 (320,000)
Maximum zero fuel weight	kg (lb)	126,100 (278,000)	133,800 (295,000)
Fuel capacity	L (US gal)	90,774 (23,980)	90,774 (23,980)
Cargo volume[2]	m^3 (ft^3)	108.8 (3,840)	108.8 (3,840)
Design range (passengers, baggage)	km (nmi)	8,060 (4,355)	10,010 (5,405)
Fuel consumed[3]	L per 100 pass-km	3.1	3.1
Carbon emissions[3]	g CO_2 per pass-km	79	79

• 3% fuel factor
[1]Highest optional weight
[2]4 96- x 125-in pallets and 14 LD-2 containers, plus bulk
[3]3,000-nmi (5,555-km) trip

Interior arrangements

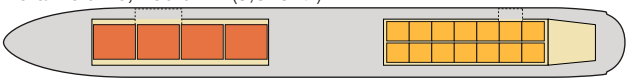
Two-class, 60-, 33-, 32-in pitch 229 passengers

24 business 205 economy



Lower hold

Total volume, 108.8 m^3 (3,840 ft^3)[1]



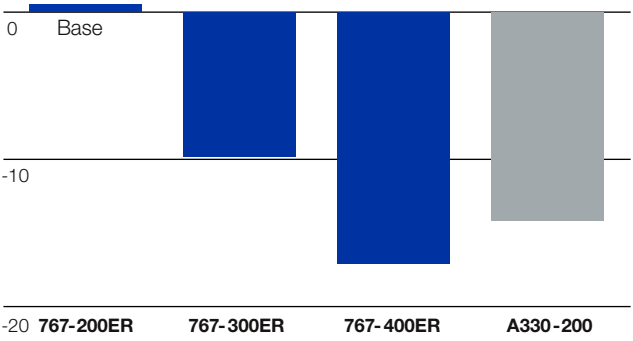
	Forward	Aft
Volume	47.0 m^3 (1,660 ft^3)	49.6 m^3 (1,750 ft^3)
	4 96- x 125-in pallets	14 LD-2s

- The 767-300ER has 12.2 m^3 (430 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 3,000-nmi (5,555-km) trip
- Two-class seating
- 3% fuel factor

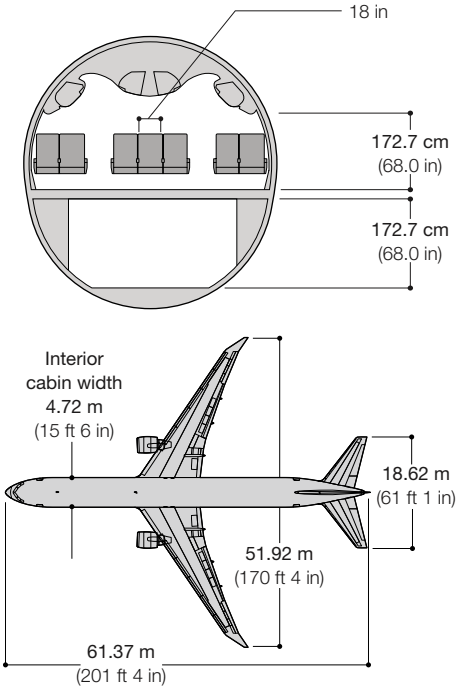
767-300ER engine options

Thrust rating BET, lb[1]

General Electric	
CF6-80C2B6F	60,200
CF6-80C2B7F	62,100
Pratt & Whitney	
PW4052	52,300
PW4056	57,100
PW4060	60,200
PW4062	63,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

767-400ER out of production



Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	181,890 (401,000)	204,570 (451,000)
Maximum takeoff weight	kg (lb)	181,430 (400,000)	204,110 (450,000)
Maximum landing weight	kg (lb)	158,750 (350,000)	158,750 (350,000)
Maximum zero fuel weight	kg (lb)	149,680 (330,000)	149,680 (330,000)
Fuel capacity	L (US gal)	90,770 (23,980)	90,770 (23,980)
Cargo volume[2]	m^3 (ft^3)	132.3 (4,670)	132.3 (4,670)
Design range (passengers, baggage)	km (nmi)	6,630 (3,580)	9,610 (5,190)
Fuel consumed[3]	L per 100 pass-km	2.9	2.9
Carbon emissions[3]	g CO_2 per pass-km	73	73

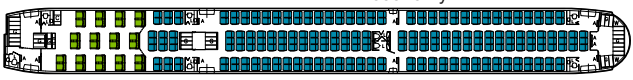
• 3% fuel factor

[1]Highest optional weight
[2]5 96- x 125-in pallets and 18 LD-2 containers, plus bulk
[3]3,000-nmi (5,555-km) trip

Interior arrangements

Two-class, 60-, 33-, 32-in pitch — 267 passengers

26 business — 241 economy



Lower hold

Total volume, 132.3 m^3 (4,670 ft^3)[1]

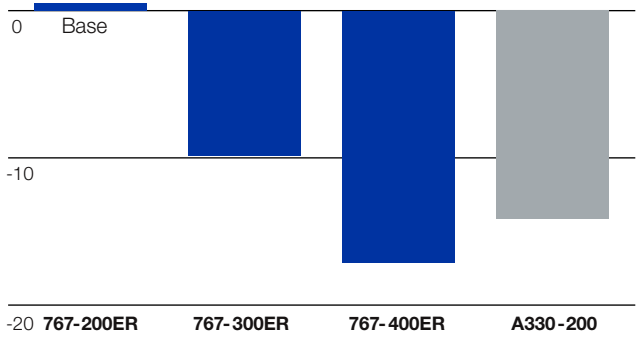
	Forward	Aft
Volume	58.8 m^3 (2,075 ft^3)	63.7 m^3 (2,250 ft^3)
	5 96- x 125-in pallets	18 LD-2s

• The 767-400ER has 9.8 m^3 (345 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 3,000-nmi (5,555-km) trip
- Two-class seating
- 3% fuel factor

767-400ER engine option

Thrust rating BET, lb[1]

General Electric	
CF6-80C2B7F1	62,100
CF6-80C2B8F	63,500
Pratt & Whitney	
PW4062	63,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Medium- to long-range market

787 family

The Boeing 787 Dreamliner is a revolutionary airplane that has transformed the commercial aviation industry. The three members of the 787 family are propelling air travel to new levels of comfort, reliability, and profitability.

The 787 treats passengers to a more comfortable cabin, larger windows, and more personal stowage space than any other medium-capacity jetliner. Cabin pressure altitude never goes above a comfortable 6,000 feet (1,830 meters).

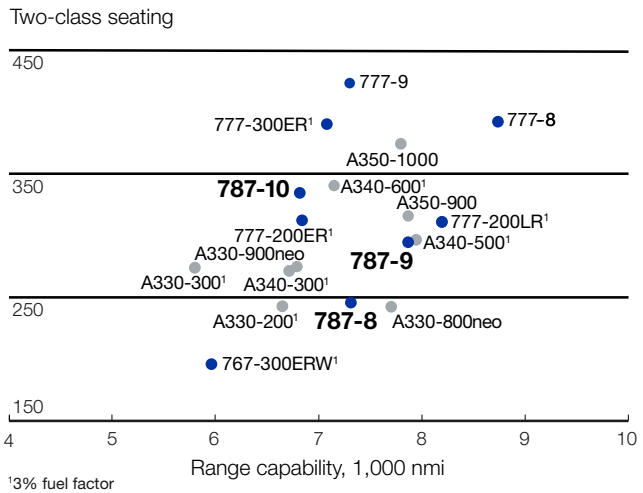
With the 787 Dreamliner family, Boeing introduced new technologies to create even better lifecycle sustainability for commercial jetliners while surpassing environmental and noise standards. Advanced materials, aerodynamics, systems, and engines combine to reduce fuel consumption and carbon emissions by 25 percent and operational costs by 15 percent compared with previous generation airplanes. Its lightweight composite structure resists fatigue and corrosion, reducing waste, fuel use, and maintenance. Lower maintenance requirements mean more time in the air and a longer productive life for greater revenue generation.

The 787 incorporates the perfect balance of commonality and flexibility, reducing financing risk and increasing market value throughout the airplane's service life. Standard interfaces facilitate component exchange and upgrades. Fast-fit IFE and an innovative flooring system enable rapid cabin reconfiguration.

The 787 can be configured with engines from either of two manufacturers. Engines are intermixable across all 787 variants configured for the same engine type, enabling fleet-wide engine and spares commonality.

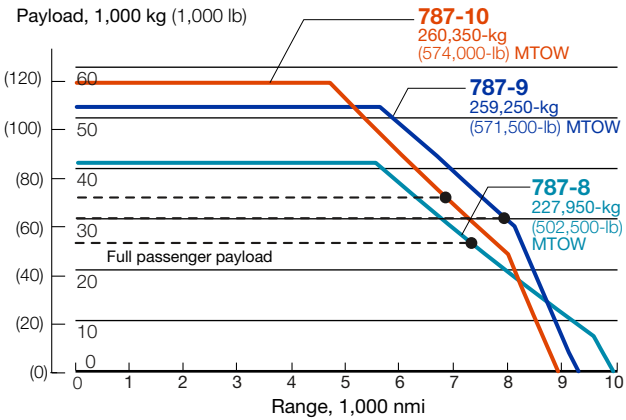
The 787 has an FAA common type rating and an EASA same type rating with the 777. A six-day differences flight training curriculum familiarizes 777-qualified crew with the 787.

The 787 family—efficiency for medium- and long-haul markets



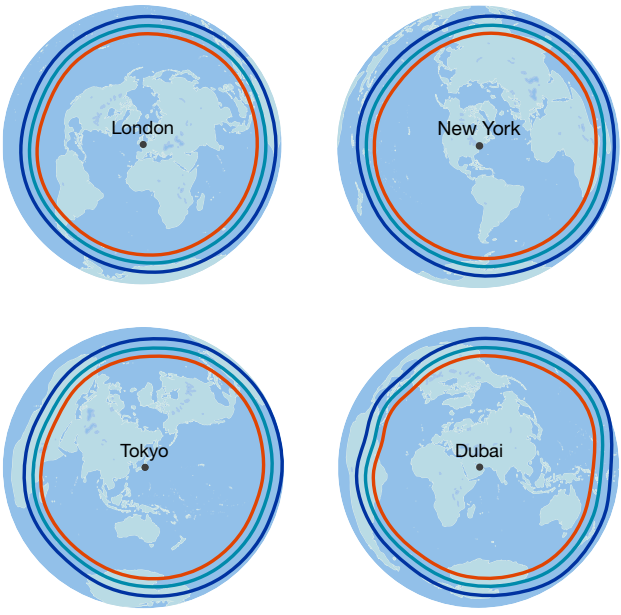
[1]3% fuel factor

Payload-range capability



- Standard rules
- Nominal performance
- Two-class interiors

Range capability from



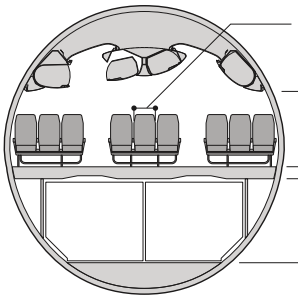
- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included

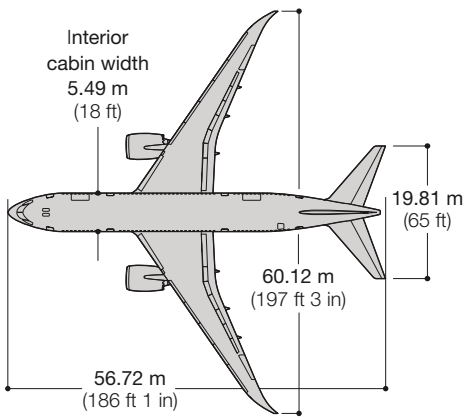
787-8
248 passengers

787-9
296 passengers

787-10
336 passengers

787-8





Principal characteristics

		Maximum
Maximum taxi weight	kg (lb)	228,400 (503,500)
Maximum takeoff weight	kg (lb)	227,950 (502,500)
Maximum landing weight	kg (lb)	172,350 (380,000)
Maximum zero fuel weight	kg (lb)	161,050 (355,000)
Fuel capacity	L (US gal)	126,206 (33,340)
Cargo volume[1]	m^3 (ft^3)	124.5 (4,397)
Design range (passengers, baggage)	km (nmi)	13,510 (7,295)
Fuel consumed[2]	L per 100 pass-km	2.6
Carbon emissions[2]	g CO_2 per pass-km	65

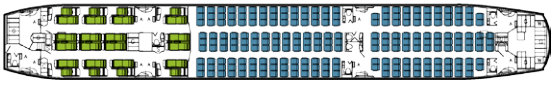
[1]5 96- x 125-in pallets and 12 LD-3 containers, plus bulk
[2]3,000-nmi (5,555-km) trip

Interior arrangement

Two-class, (85-, 32-in pitch) 248 passengers

24 business 224 economy

2 berths, 1 seat 6 berths



Lower hold

Total volume, 124.5 m³ (4,397 ft³)[1]

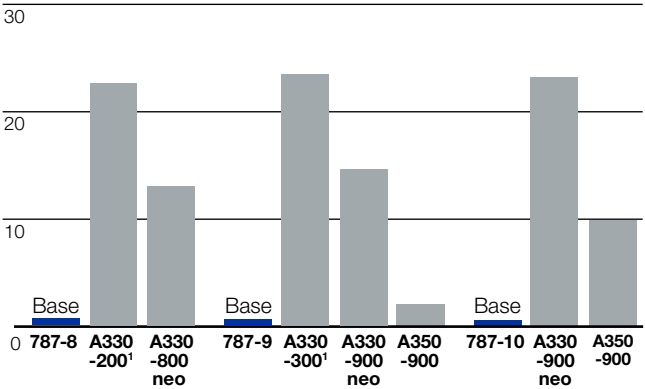
	Forward	Aft
Volume	58.8 m³ (2,075 ft³)	54.4 m³ (1,920 ft³)
	5 96- x 125-in pallets	12 LD-3s

- The 787-8 has 11.4 m³ (402 ft³) of bulk cargo volume

[1]Includes bulk cargo volume

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating (85-, 32-in pitch)

[1]3% fuel factor

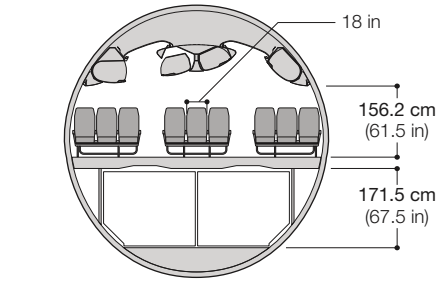
787-8 engine options

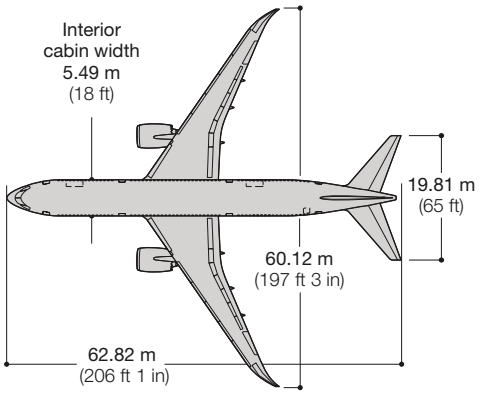
Thrust rating BET, lb[1]

General Electric		Rolls-Royce	
GEnx-1B64	64,000	Trent 1000-H	58,200
GEnx-1B67	67,200	Trent 1000-AE	64,100
GEnx-1B70	70,000	Trent 1000-G	67,300
GEnx-1B70/75	70,200[2]	Trent 1000-CE	70,100
		Trent 1000-D	70,200[2]

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance
[2]High and/or hot thrust bump

787-9





Principal characteristics

		Basic	Maximum
Maximum taxi weight	kg (lb)	248,100 (547,000)	259,900 (573,000)
Maximum takeoff weight	kg (lb)	247,200 (545,000)	259,250 (571,500)
Maximum landing weight	kg (lb)	192,800 (425,000)	192,800 (425,000)
Maximum zero fuel weight	kg (lb)	181,450 (400,000)	181,450 (400,000)
Fuel capacity	L (US gal)	126,887 (33,520)	126,887 (33,520)
Cargo volume[1]	m^3 (ft^3)	154.4 (5,452)	154.4 (5,452)
Design range (passengers, baggage)	km (nmi)	13,030 (7,035)	14,560 (7,860)
Fuel consumed[2]	L per 100 pass-km	2.4	2.4
Carbon emissions[2]	g CO_2 per pass-km	60	60

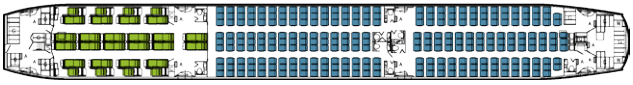
[1]6 96- x 125-in pallets and 16 LD-3 containers, plus bulk
[2]3,000-nmi (5,555-km) trip

Interior arrangement

Two-class (85-, 32-in pitch) 296 passengers

28 business
2 berths, 1 seat

268 economy
6 berths



Lower hold

Total volume, 154.4 m³ (5,452 ft³)[1]

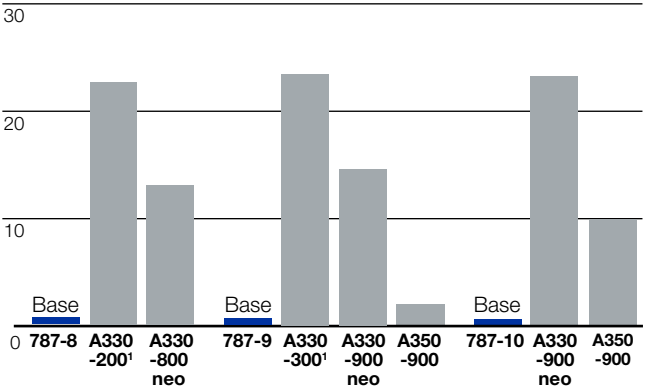
	Forward	Aft
Volume	70.5 m³ (2,490 ft³) 6 96- x 125-in pallets	72.5 m³ (2,560 ft³) 16 LD-3s

- The 787-9 has 11.4 m³ (402 ft³) of bulk cargo volume

[1]Includes bulk cargo volume

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating (85-, 32-in pitch)

[1]3% fuel factor

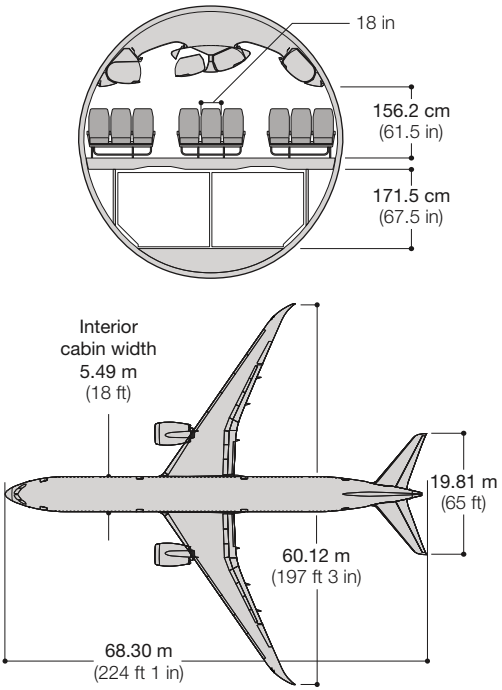
787-9 engine options

Thrust rating BET, lb[1]

General Electric		Rolls-Royce	
GEnx-1B70/75	70,200[2]	Trent 1000-D	70,200[2]
GEnx-1B74/75	74,500[2]	Trent 1000-J	74,400
GEnx-1B76A	76,100[2]	Trent 1000-K	74,400[2]
		Trent 1000-N	76,400[2]

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance
[2]High and/or hot thrust bump

787-10



Principal characteristics

		Basic	Maximum
Maximum taxi weight	kg (lb)	243,600 (537,000)	261,050 (575,500)
Maximum takeoff weight	kg (lb)	242,650 (535,000)	260,350 (574,000)
Maximum landing weight	kg (lb)	201,850 (445,000)	201,850 (445,000)
Maximum zero fuel weight	kg (lb)	192,800 (425,000)	192,800 (425,000)
Fuel capacity	L (US gal)	126,887 (33,520)	126,887 (33,520)
Cargo volume[1]	m^3 (ft^3)	175.2 (6,187)	175.2 (6,187)
Design range (passengers, baggage)	km (nmi)	10,320 (5,570)	12,610 (6,805)
Fuel consumed[2]	L per 100 pass-km	2.2	2.2
Carbon emissions[2]	g CO_2 per pass-km	56	56

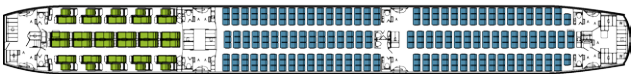
[1]7 96- x 125-in pallets and 18 LD-3s containers, plus bulk
[2]3,000-nmi (5,555-km) trip

Interior arrangement

Two-class, 85-, 32-in pitch — 336 passengers

32 business — 304 economy

2 berths, 1 seat — 6 berths



Lower hold

Total volume, 175.2 m³ (6,187 ft³)[1]

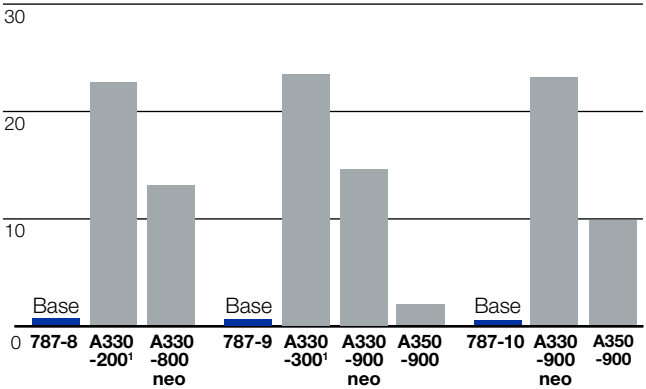
	Forward	Aft
Volume	82.3 m³ (2,905 ft³)	81.6 m³ (2,880 ft³)
	7 96- x 125-in pallets	18 LD-3s

- The 787-10 has 11.4 m³ (402 ft³) of bulk cargo volume

[1]Includes bulk cargo volume

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating (85-, 32-in pitch)

[1]3% fuel factor

787-10 engine options

Thrust rating BET, lb[1]

General Electric		Rolls-Royce	
GEnx-1B74/75	74,500[2]	Trent 1000-J	74,400
GEnx-1B76	76,100	Trent 1000-K	74,400[2]
GEnx-1B76A	76,100[2]	Trent 1000-M	76,400
		Trent 1000-N	76,400[2]

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

[2]High and/or hot thrust bump

Medium- to long-range market

777 family

Proud flagship of airlines worldwide, the 777 twinjet family enables operators to cover a broad range of markets. Operators worldwide use their 777s to pioneer new routes and improve the efficiency of their existing networks.

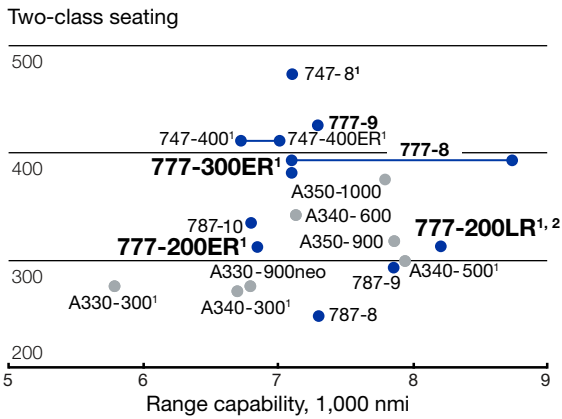
The broad acceptance and diverse customer base of the 777 demonstrates its effectiveness and worldwide success. Preferred by operators, passengers, and investors, this complete airplane family is efficient, reliable, economical, and comfortable. The 777—the world's most reliable twin-aisle jetliner—has continually incorporated new technology and innovations to further improve operating costs, improve airplane performance, and enhance the passenger experience.

The environmentally progressive 777 family meets stringent environmental standards for emissions. Extremely quiet, it also meets all current noise standards, enabling flexible operations at noise-sensitive airports.

An award-winning interior further distinguishes the 777. Open and spacious, the 777 has a wider cabin and larger windows than any competing airplane. Room for an additional seat in every row gives airlines the opportunity to boost revenue passenger capacity while maintaining a high level of passenger comfort. Renowned for its comfort and convenience, it features spacious overhead bins that make it easier for travelers to stow carry-on luggage close to their seats.

The 777-300ER can directly link New York with Hong Kong or Dubai, while the 777-200LR Worldliner flies even farther. The 777-200LR is the same size as the 777-200ER, carries more revenue cargo on existing long-distance routes, and opens new long-distance point-to-point markets. The 777-200LR strategically adds value to operators' networks by profitably serving routes no other commercial airplane can serve.

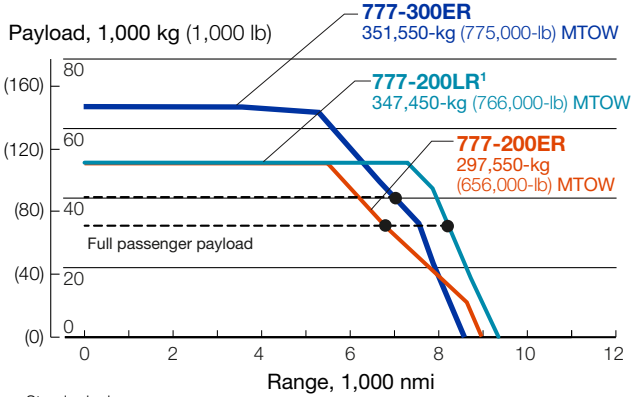
The 777 family expands the medium-capacity long-range market



- Standard rules
- Two-class seating (85-, 32-in pitch)

[1]3% fuel factor
[2]Fuel volume limited

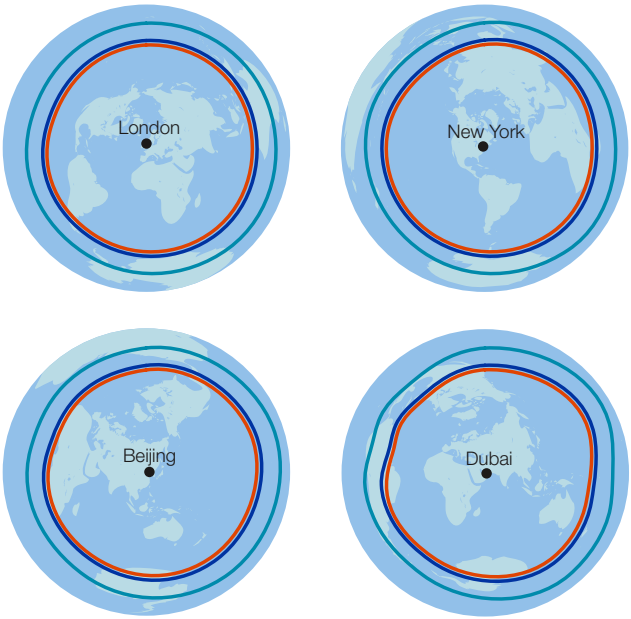
Payload-range capability



- Standard rules
- Nominal performance
- Two-class seating
- 3% fuel factor

[1]Fuel volume limited

Range capability from



- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

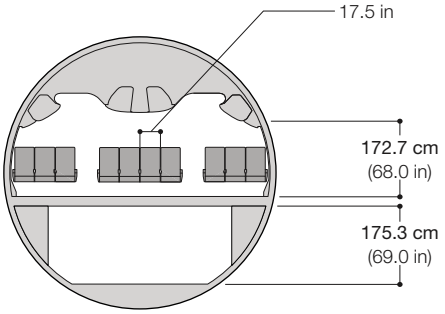
[1]Fuel volume limited

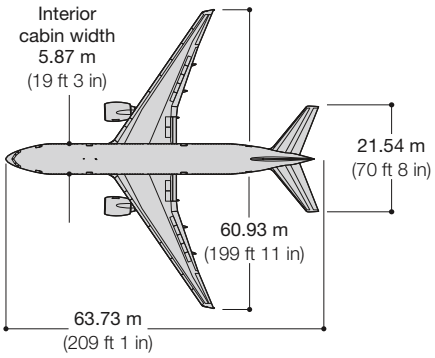
777-300ER
392 passengers

777-200LR[1]
313 passengers

777-200ER
313 passengers

777-200ER





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	264,000 (582,000)	298,450 (658,000)
Maximum takeoff weight	kg (lb)	263,100 (580,000)	297,550 (656,000)
Maximum landing weight	kg (lb)	208,650 (460,000)	213,200 (470,000)
Maximum zero fuel weight	kg (lb)	195,050 (430,000)	200,500 (442,000)
Fuel capacity	L (US gal)	171,176 (45,220)	171,176 (45,220)
Cargo volume[2]	m^3 (ft^3)	150.9 (5,330)	150.9 (5,330)
Design range (passengers, baggage)	km (nmi)	9,200 (4,970)	12,680 (6,845)
Fuel consumed[3]	L per 100 pass-km	3.0	3.0
Carbon emissions[3]	g CO_2 per pass-km	79	79

• 3% fuel factor

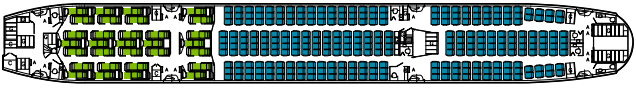
[1]Highest optional weight
[2]6 96- x 125-in pallets and 14 LD-3 containers, plus bulk
[3]3,000-nmi (5,555-km) trip

Interior arrangement

Two-class, 85-, 32-in pitch — 313 passengers

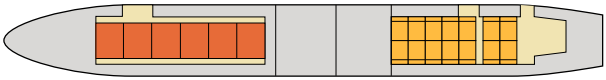
31 business — 282 economy

2 berths and 2 crew rest seats — 6 berths



Lower hold

Total volume, 150.9 m^3 (5,330 ft^3)[1]



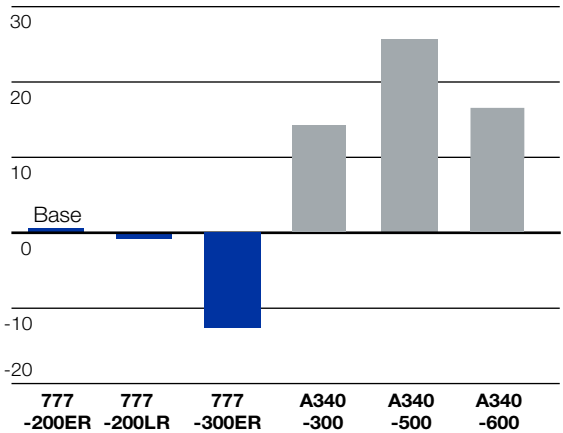
	Forward	Aft
Volume	70.5 m^3 (2,490 ft^3)	63.4 m^3 (2,240 ft^3)
	6 96- x 125-in pallets	14 LD-3s

- The 777-200ER has 17.0 m^3 (600 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating (85-, 32-in pitch)
- 3% fuel factor

777-200ER engine options

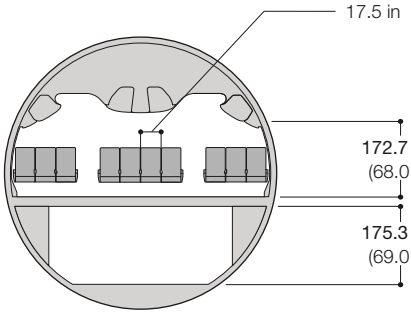
Thrust rating BET, lb[1]

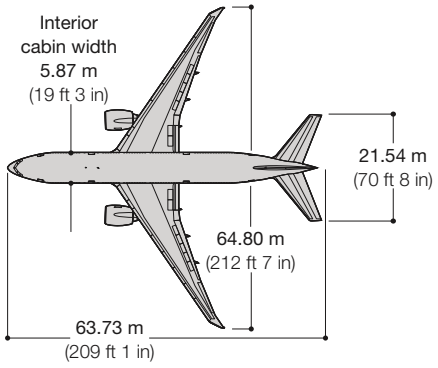
General Electric		Rolls-Royce	
GE90-85B	84,700	Trent 884	83,500
GE90-90B	90,000	Trent 892	90,000
GE90-94B	93,700	Trent 895	93,300

Pratt & Whitney	
PW4084	84,400
PW4090	90,000

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

777-200LR





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	322,950 (712,000)	348,350 (768,000)
Maximum takeoff weight	kg (lb)	322,050 (710,000)	347,450 (766,000)
Maximum landing weight	kg (lb)	223,150 (492,000)	223,150 (492,000)
Maximum zero fuel weight	kg (lb)	209,100 (461,000)	209,100 (461,000)
Fuel capacity	L (US gal)	181,283 (47,890)	181,283 (47,890)
Cargo volume[2]	m^3 (ft^3)	150.9 (5,330)	150.9 (5,330)
Design range (passengers, baggage)	km (nmi)	13,930 (7,520)	15,160 (8,185)[3]
Fuel consumed[4]	L per 100 pass-km	3.1	3.1
Carbon emissions[4]	g CO_2 per pass-km	77	77

• 3% fuel factor

[1]Highest optional weight
[2]6 96- x 125-in pallets and 14 LD-3 containers, plus bulk
[3]Fuel volume limited
[4]3,000-nmi (5,555-km) trip

Interior arrangements

Two-class, 85-, 32-in pitch

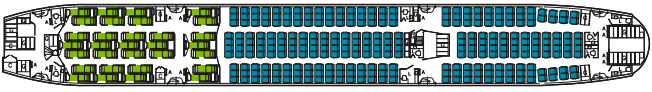
313 passengers

31 business

282 economy

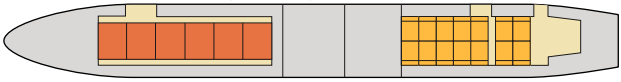
2 berths and 2 crew rest seats

6 berths



Lower hold

Total volume, 150.9 m^3 (5,330 ft^3)[1]



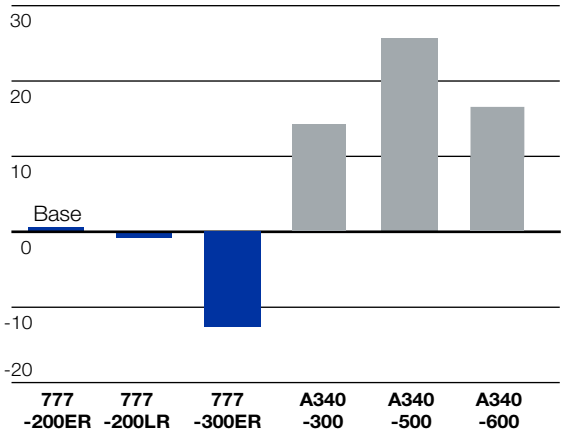
	Forward	Aft
Volume	70.5 m^3 (2,490 ft^3) 6 96- x 125-in pallets	63.4 m^3 (2,240 ft^3) 14 LD-3s

- The 777-200LR has 17.0 m^3 (600 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating (85-, 32-in pitch)
- 3% fuel factor

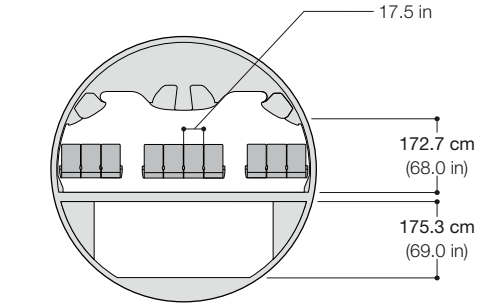
777-200LR engine options

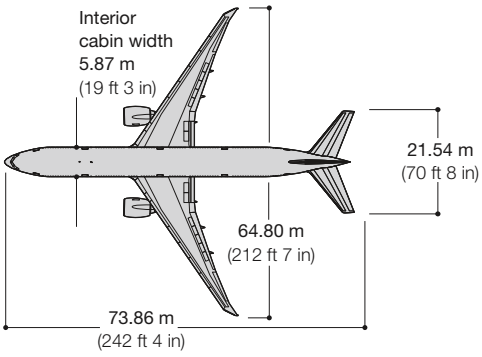
Thrust rating BET, lb[1]

General Electric	
GE90-110B1L	110,100
GE90-115BL	115,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

777-300ER





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	318,400 (702,000)	352,450 (777,000)
Maximum takeoff weight	kg (lb)	317,500 (700,000)	351,550 (775,000)
Maximum landing weight	kg (lb)	251,300 (554,000)	251,300 (554,000)
Maximum zero fuel weight	kg (lb)	237,700 (524,000)	239,950 (529,000)
Fuel capacity	L (US gal)	181,283 (47,890)	181,283 (47,890)
Cargo volume[2]	m^3 (ft^3)	201.6 (7,120)	201.6 (7,120)
Design range (passengers, baggage)	km (nmi)	10,170 (5,490)	13,120 (7,085)
Fuel consumed[3]	L per 100 pass-km	2.7	2.7
Carbon emissions[3]	g CO_2 per pass-km	69	69

• 3% fuel factor

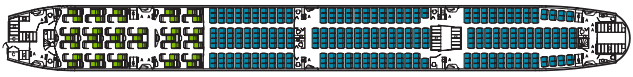
[1]Highest optional weight
[2]6 96- x 125-in pallets and 14 LD-3 containers, plus bulk
[3]3,000-nmi (5,555-km) trip

Interior arrangements

Two-class, 85-, 32-in pitch — 392 passengers

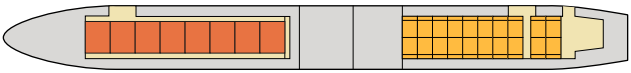
38 business — 2 berths and 2 crew rest seats

354 economy — 8 berths



Lower hold

Total volume, 201.6 m^3 (7,120 ft^3)[1]



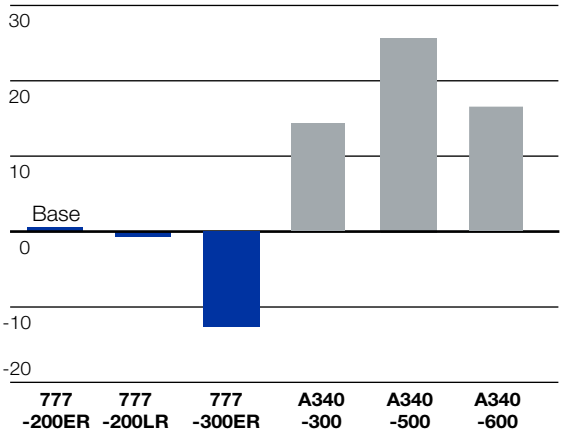
	Forward	Aft
Volume	94.0 m^3 (3,320 ft^3)	90.6 m^3 (3,200 ft^3)
	8 96- x 125-in pallets	20 LD-3s

- The 777-300ER has 17.0 m^3 (600 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating (85-, 32-in pitch)
- 3% fuel factor

777-300ER engine options

Thrust rating BET, lb[1]

General Electric

GE90-115BL 115,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Medium- to long-range market

777X family

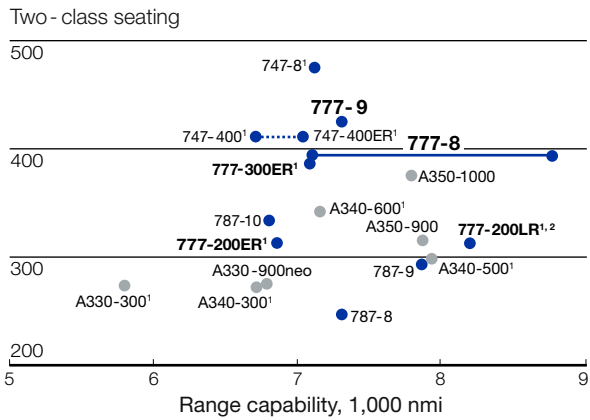
The new 777X family builds on the legacy of the 777 and incorporates new and 787-proven technology to deliver best-in-class fuel efficiency and range to the widebody market. Customers will be able to take advantage of a 20 percent fuel improvement over today's 777 while having an airplane that supports future growth. The 777X is a generational leap in aerodynamic technology with an unconstrained wing design. Along with GE exclusive technologies that will bring 5 percent lower specific fuel consumption than any other competing engine, the 777X brings together a balance between aerodynamics, weight, and propulsion for the world's most efficient, most sustainable, reliable widebody airplane.

The environmentally friendly 777X family has the lowest carbon emissions of its class, and exceeds stringent environmental standards for emissions. Extremely quiet, it also meets all current noise standards, enabling flexible operations at noise-sensitive airports.

The exceptional cabin experience of the 777X includes an innovative new interior architecture that is 4 inches wider than the 777 with 30 percent larger windows, a lower cabin altitude, improved air filtration and humidity, and larger bins. In addition, the 777X features an advanced connectivity experience that revolutionizes how information reaches passengers, cabin crew, and ground crew.

The 777X family spans all possibilities. The 777-8 can fly the same mission as the A350-1000 with lower thrust, fuel consumption, emissions, and cost. The 777-8 has the versatility to fly the longest or most challenging missions, providing operators with the greatest revenue opportunities and network flexibility. The larger-capacity 777-9 provides additional network growth opportunities. It can directly link New York with Hong Kong or Dubai with more payload than today's 777-300ER.

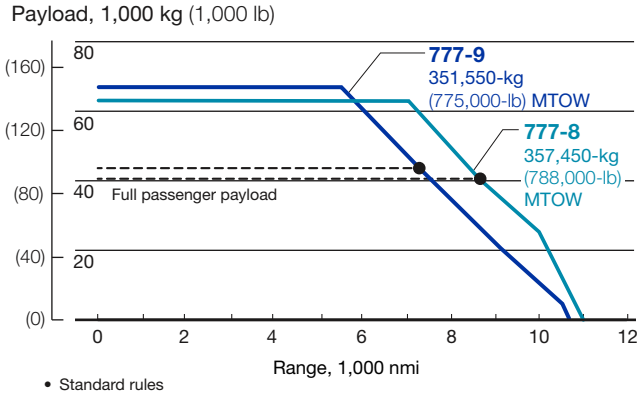
777X family—expands the medium-capacity long-range market



- Standard rules
- Two-class seating (85-, 32-in pitch)

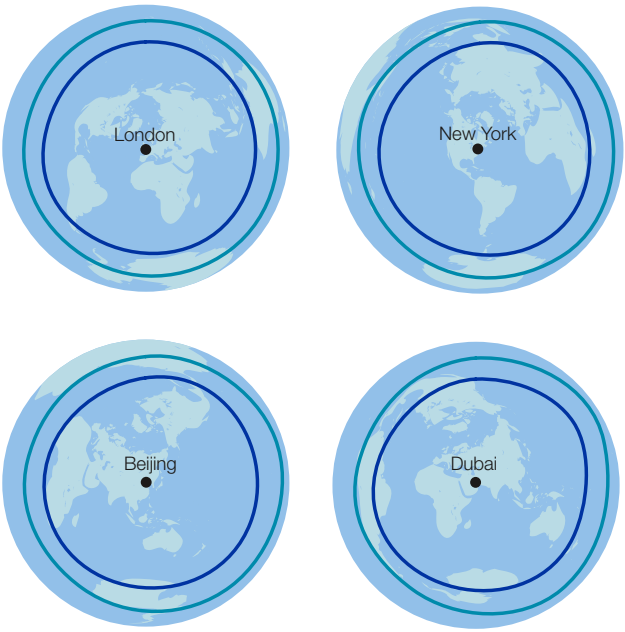
[1]3% fuel factor
[2]Fuel volume limited

Payload-range capability



- Standard rules
- Nominal performance
- Two-class interiors

Range capability from

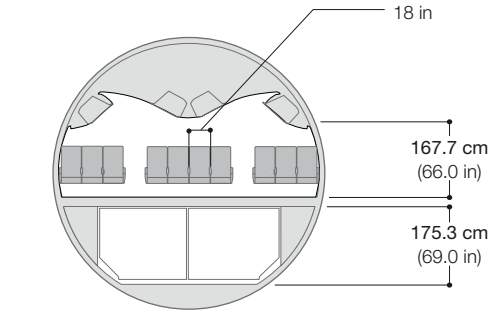


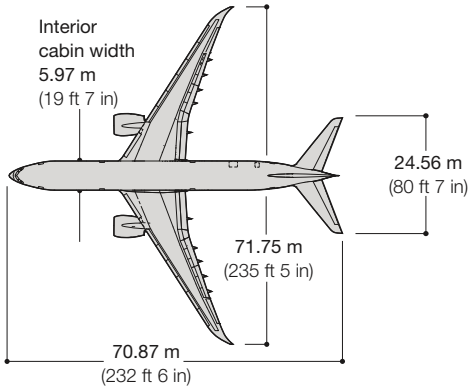
- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included

777-9
426 passengers

777-8
395 passengers

777-8





Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	313,900 (692,000)	366,050 (807,000)
Maximum takeoff weight	kg (lb)	313,000 (690,000)	365,150 (805,000)
Maximum landing weight	kg (lb)	252,650 (557,000)	259,000 (571,000)
Maximum zero fuel weight	kg (lb)	239,050 (527,000)	245,400 (541,000)
Fuel capacity	L (US gal)	197,355 (52,135)	197,355 (52,135)
Cargo volume[2]	m^3 (ft^3)	179.3 (6,332)	179.3 (6,332)
Design range (passengers, baggage)	km (nmi)	11,370 (6,140)	16,190 (8,745)
Fuel consumed[3]	L per 100 pass-km	2.3	2.3
Carbon emissions[3]	g CO_2 per pass-km	58	58

[1]Highest optional weight
[2]7 96- x 125-in pallets and 18 LD-3 containers, plus bulk
[3]3,000-nmi (5,555-km) trip

Interior arrangement

Two-class, 85-, 32-in pitch

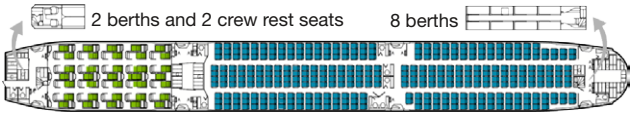
395 passengers

35 business

360 economy

2 berths and 2 crew rest seats

8 berths



Lower hold

Total volume, 179.3 m^3 (6,332 ft^3)[1]

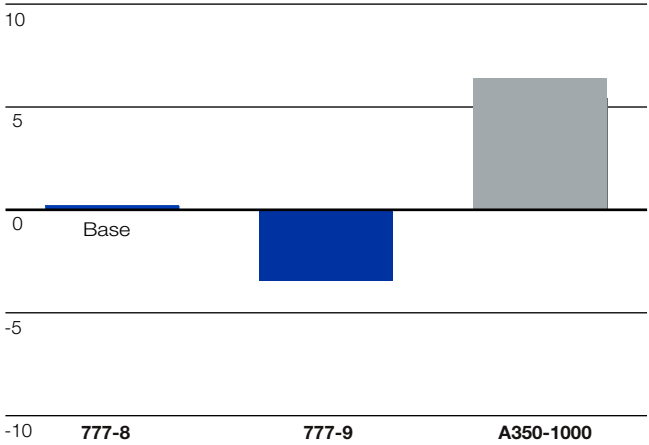
	Forward	Aft
Volume	82.3 m^3 (2,905 ft^3)	81.6 m^3 (2,880 ft^3)
	7 96- x 125-in pallets	18 LD-3 containers

- The 777-8 has 15.5 m^3 (547 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating

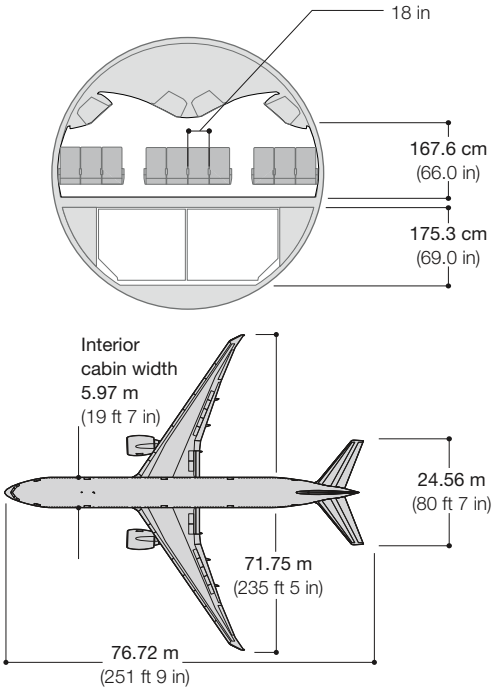
777-8 engine options

Thrust rating BET, lb[1]

General Electric	
GE9X-93B1A	93,500
GE9X-105B1A	104,900

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

777-9



Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	327,500 (722,000)	352,450 (777,000)
Maximum takeoff weight	kg (lb)	326,600 (720,000)	351,550 (775,000)
Maximum landing weight	kg (lb)	266,250 (587,000)	266,250 (587,000)
Maximum zero fuel weight	kg (lb)	254,900 (562,000)	254,900 (562,000)
Fuel capacity	L (US gal)	197,350 (52,135)	197,350 (52,135)
Cargo volume[2]	m^3 (ft^3)	218.2 (7,707)	218.2 (7,707)
Design range (passengers, baggage)	km (nmi)	10,860 (5,865)	13,510 (7,295)
Fuel consumed[3]	L per 100 pass-km	2.2	2.2
Carbon emissions[3]	g CO_2 per pass-km	55	55

[1]Highest optional weight
[2]8 96- x 125-in pallets and 24 LD-3 containers, plus bulk
[3]3,000-nmi (5,555-km) trip

Interior arrangement

Two-class, 85-, 32-in pitch

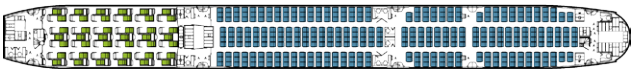
426 passengers

42 business

384 economy

2 berths and 2 crew rest seats

8 berths



Lower hold

Total volume, 218.2 m^3 (7,707 ft^3)[1]

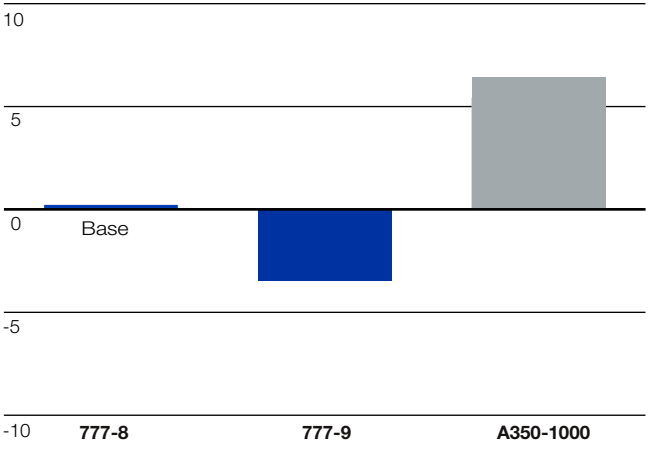
	Forward	Aft
Volume	103.1 m^3 (3,640 ft^3) 8 96- x 125-in pallets 2 LD-3 containers	99.7 m^3 (3,520 ft^3) 22[2] LD-3 containers

- The 777-9 has 15.5 m^3 (547 ft^3) of bulk cargo

[1]Includes bulk cargo
[2]Requires large cargo door option

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Two-class seating

777-9 engine options

Thrust rating BET, lb[1]

General Electric
GE9X-105B1A 104,900

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Medium- to long-range market

747-8 Intercontinental

The 747-8 Intercontinental combines the market-proven strengths of the 747 with a newly designed wing, all-new GEnx engines, state-of-the-art systems, and advanced materials. The result is an exceptionally efficient airplane.

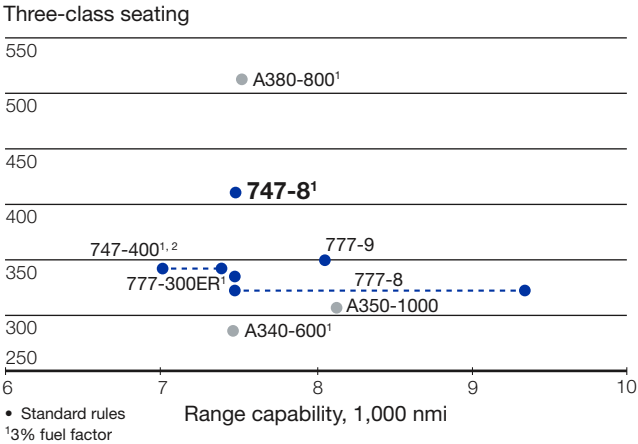
Ideal for replacement or growth, the 747-8's 7,480-nautical-mile range enables airlines to directly link almost any two cities in the world. The 747-8 Intercontinental offers airlines a compatible, next-larger airplane beyond the 777X, for seamless market coverage on high-demand routes or to open new markets with exceptional hot and/or high performance capability.

Reduced economic risk is another Intercontinental strength. More flexible and efficient than the competition, it can use all the same airports worldwide as the 747-400. It also uses exactly the same ground-support equipment to keep introductory costs low.

Taking an airplane that travelers love and making it better, the 747-8 Intercontinental features a new interior. Inspired by that of the Boeing 787 Dreamliner, it is welcoming, comfortable, and stress-free for passengers and crew. Unlike the competition, the Intercontinental features private and exclusive premium cabins—a flagship experience for premium passengers.

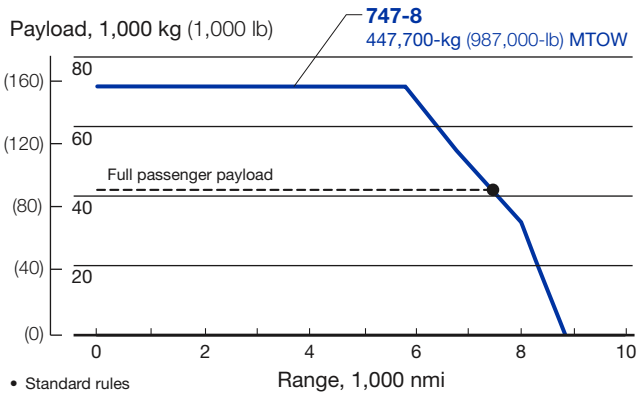
The 747-8 Intercontinental is the environmental leader in its size class. Structural, aerodynamic, and propulsion efficiency together yield a 16 percent improvement in in-service fuel use and CO_2 emissions per passenger-kilometer relative to the 747-400. The 747-8 also features advanced noise-reduction technologies that make it extremely quiet. It meets the latest noise standards and complies with QC2 takeoff requirements.

747 family—right size and range for the large-airplane market



• Standard rules
[1]3% fuel factor
[2]Fuel volume limited
[3]Range computed with auxilary tank

Payload-range capability



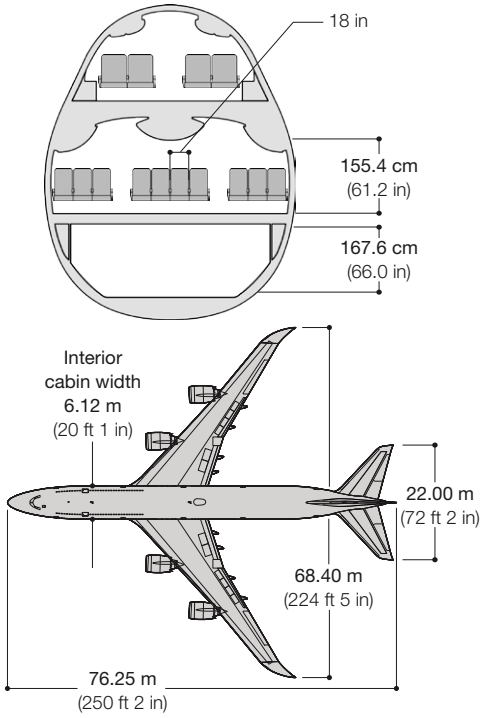
- Standard rules
- Nominal performance
- Three-class seating
- 3% fuel factor

Range capability from

- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

747-8
410 passengers

747-8 Intercontinental



Principal characteristics

		Maximum
Maximum taxi weight	kg (lb)	449,050 (990,000)
Maximum takeoff weight	kg (lb)	447,700 (987,000)
Maximum landing weight	kg (lb)	312,050 (688,000)
Maximum zero fuel weight	kg (lb)	295,300 (651,000)
Fuel capacity	L (US gal)	238,610 (63,034)
Cargo volume[1]	m^3 (ft^3)	176.3 (6,225)
Design range (passengers, baggage)	km (nmi)	13,850 (7,480)
Fuel consumed[2]	L per 100 pass-km	3.2
Carbon emissions[2]	g CO_2 per pass-km	81.4

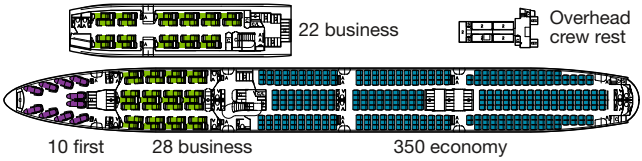
• 3% fuel factor

[1]7 96- x 125-in pallets and 16 LD-1 containers, plus bulk

[2]3,000-nmi (5,555-km) trip

Interior arrangement

Three-class, 82-, 85-, 32-in pitch 410 passengers
In-flight pilot rest, 2 bunks



Lower hold

Total volume, 176.3 m^3 (6,225 ft^3)[1]

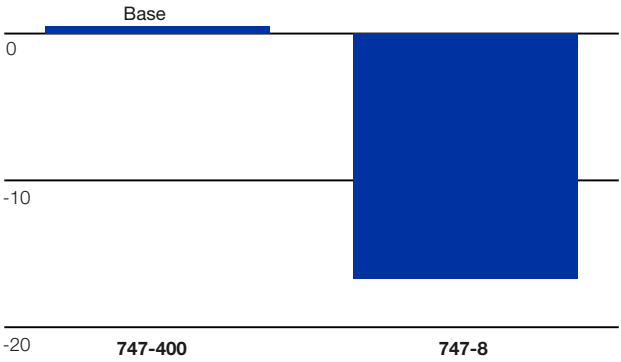
	Forward	Aft
Volume	82.3 m^3 (2,905 ft^3)	79.3 m^3 (2,800 ft^3)
	7 96- x 125-in pallets	16 LD-1s

- The 747-8 has 14.7 m^3 (520 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Three-class seating (82-, 85-, 32-in pitch)
- 3% fuel factor

747-8 engine options

Thrust rating BET, lb[1]

General Electric
GEnx-2B67 66,500

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Medium- to long-range market

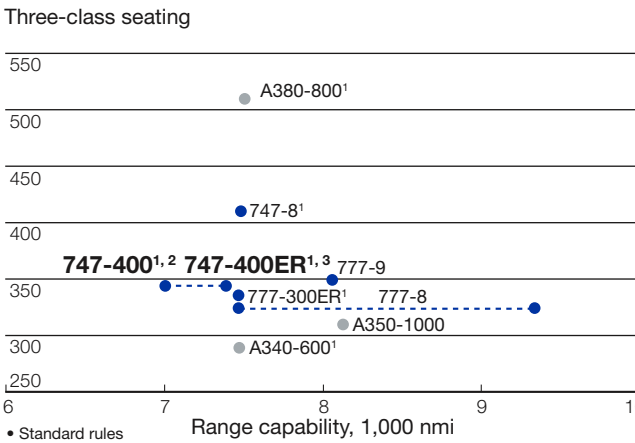
747-400 family
(out-of-production airplanes)

With more than 40 years of innovation and market leadership, the 747 is unmistakably the world's best-known airplane—and the airplane that passengers prefer the most.

The fastest airplane in service in the world, the 747 is the best choice for high-capacity, long-range markets worldwide. It can fly from Los Angeles to Sydney or New York to Seoul with a full passenger payload. In a typical three-class configuration, the 747-400 can carry 344 passengers more than 7,000 nautical miles. The 747-400ER offers increased range—nearly 400 nautical miles farther than the 747-400—or increased payload capability.

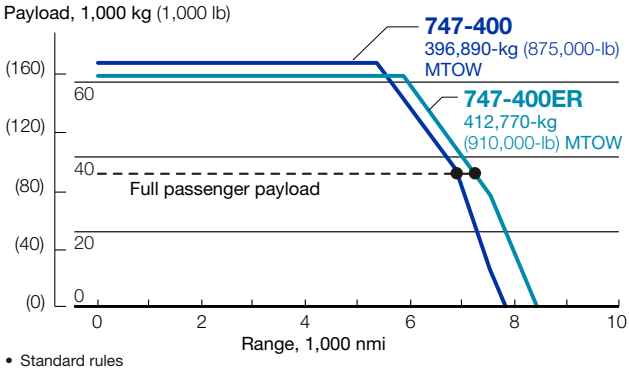
The extensive customer base of the 747 makes it easy to integrate new members of the 747 family into existing fleets. Commonalities among all models reduce costs of operation and maintenance, and help preserve residual and resale value.

747 family—right size and range for the large-airplane market



• Standard rules
[1]3% fuel factor
[2]Fuel volume limited
[3]Range computed with auxilary tank

Payload-range capability



- Standard rules
- Nominal performance
- Three-class seating
- 3% fuel factor

Range capability from

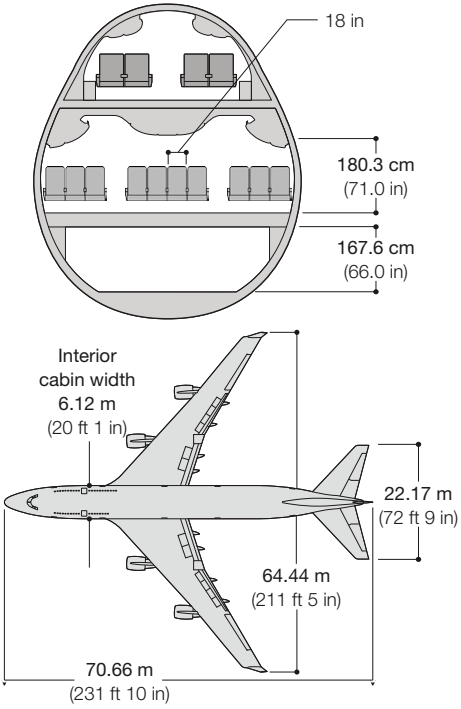
- Full passenger payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

[1]Range computed with second auxiliary tank
[2]Fuel volume limited

747-400ER[1]
344 passengers

747-400[2]
344 passengers

747-400 out of production



Principal characteristics

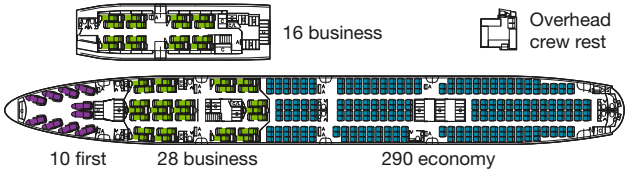
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	364,250 (803,000)	398,250 (878,000)
Maximum takeoff weight	kg (lb)	362,850 (800,000)	396,890 (875,000)[2]
Maximum landing weight	kg (lb)	260,350 (574,000)	295,740 (652,000)
Maximum zero fuel weight	kg (lb)	242,650 (535,000)	251,740 (555,000)
Fuel capacity			
P&W and Rolls-Royce engines	L (US gal)	204,355 (53,985)	216,847 (57,285)[3]
GE engines	L (US gal)	203,523 (53,765)	216,015 (57,065)[3]
Cargo volume[4]	m^3 (ft^3)	151.8 (5,360)	151.8 (5,360)
Design range (passengers, baggage)	km (nmi)	10,970 (5,925)	12,980 (7,010)[5]
Fuel consumed[6]	L per 100 pass-km	3.8	3.8
Carbon emissions[6]	g CO_2 per pass-km	97.4	97.4

- 3% fuel factor

[1]Highest optional weight
[2]Loading restrictions apply
[3]Includes tail fuel
[4]5 96- x 125-in pallets and 14 LD-1 containers, plus bulk
[5]Fuel volume limited
[6]3,000-nmi (5,555-km) trip

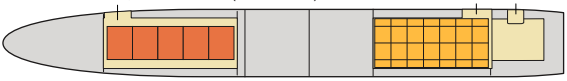
Interior arrangement

Three-class, 82-, 85-, 32-in pitch 344 passengers



Lower hold

Total volume, 151.8 m^3 (5,360 ft^3)[1]



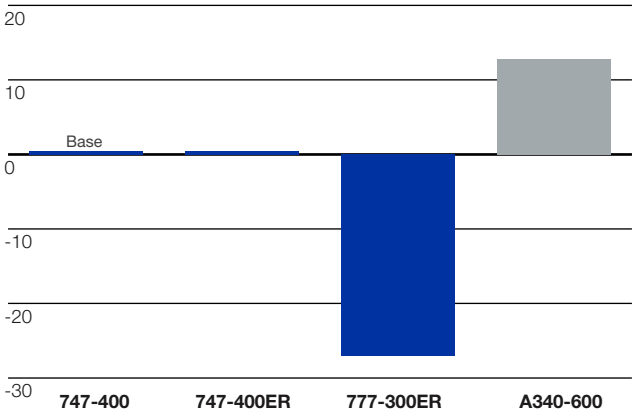
	Forward	Aft
Volume	58.8 m^3 (2,075 ft^3)	69.4 m^3 (2,450 ft^3)
	5 96- x 125-in pallets	14 LD-1s

- The 747-400 has 23.6 m^3 (835 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative seat-mile cost, %



- Standard rules
- 6,000-nmi (11,110-km) trip
- Three-class seating (82-, 85-, 32-in pitch)
- 3% fuel factor

747-400 engine options

Thrust rating BET, lb[1]

General Electric		Rolls-Royce	
CF6-80C2B1F	56,500	RB211-524G2-T	56,400
CF6-80C2B5F	62,100	RB211-524H2-T	59,500
Pratt & Whitney			
PW4056	57,100		
PW4062	63,300		

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Boeing Freighter Family

737-800BCF

767-300F

767-300BCF

777F

747-8F

The Boeing freighter family is a complete and comprehensive offering of large-, medium-, and standard-body freighters that gives customers the ability to choose the right airplane for the right mission. Boeing production and converted freighters are designed to meet a wide array of requirements which enable every customer to select the perfect fit for their fleet. A variety of payload capabilities, range requirements, and operational constraints can all be accommodated within the Boeing family.

Boeing offers the only true family of freighters that carry from 23 to 137 metric tons of revenue payload. And because the freighters are based on a Boeing platform, there are substantial commonality benefits for direct transfer and efficient mixed-fleet flying. Air cargo operators with a Boeing fleet have the ability to adapt to highly directional markets, and all Boeing freighters fit into existing airport infrastructure.

Boeing freighters offer exceptional value for your bottom line. The freighter family is designed for real-world cargo densities with more revenue cargo space while offering superior range capability to serve new and existing markets. The industry-leading reliability, fuel efficiency, and economics with the lowest trip and tonne-kilometer cost in every size make Boeing freighters the most competitive products in the market today.

Freighter market

737-800BCF

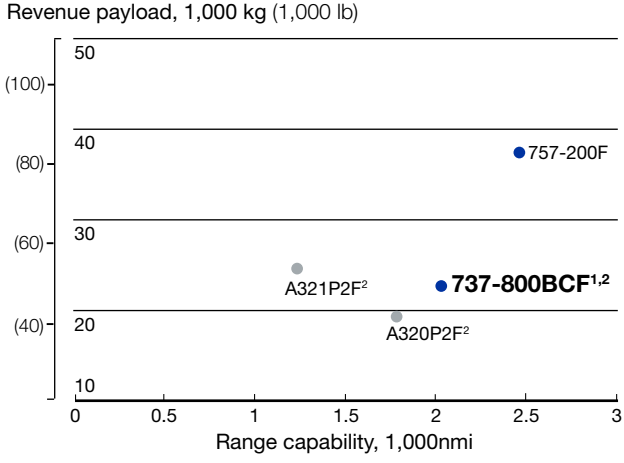
737-800 Boeing Converted Freighter (BCF) is the newest member of the freighter family, offering the greatest efficiency for the standard-body freighter market. The 737-800BCF is built on the industry's most efficient and reliable airplane. The 737-800BCF is the only OEM-converted, standard-body freighter that meets the highest standards for quality to ensure the greatest value.

The 737-800BCF has a maximum structural payload of 23.9 metric tons with excellent operating economics to maximize profit for your cargo operations.

The 737-800BCF is up to 20 percent more fuel efficient per tonne than the 737 Classic freighters. The 737-800BCF also leverages 737 Classic freighter operational commonality. The 737-800BCF provides operators with improved fuel efficiency, more payload, and more range capability to deliver a true competitive advantage in the standard-body freighter market.

In addition, Boeing converted freighters give operators key advantages, including integrated manuals, world-class customer support, and superior schedule reliability compared to competing conversions.

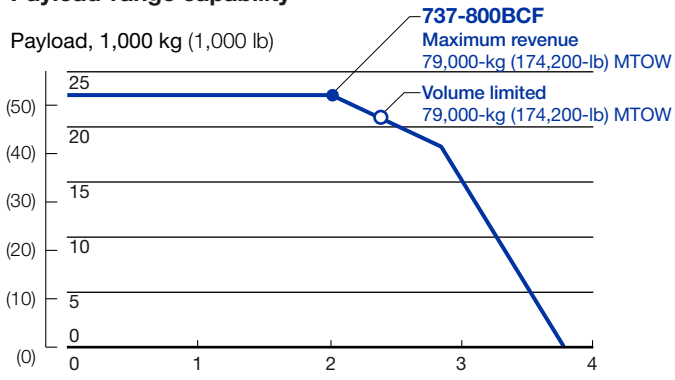
Boeing has a complete family of freighters



• A321P2F with V2500 engines

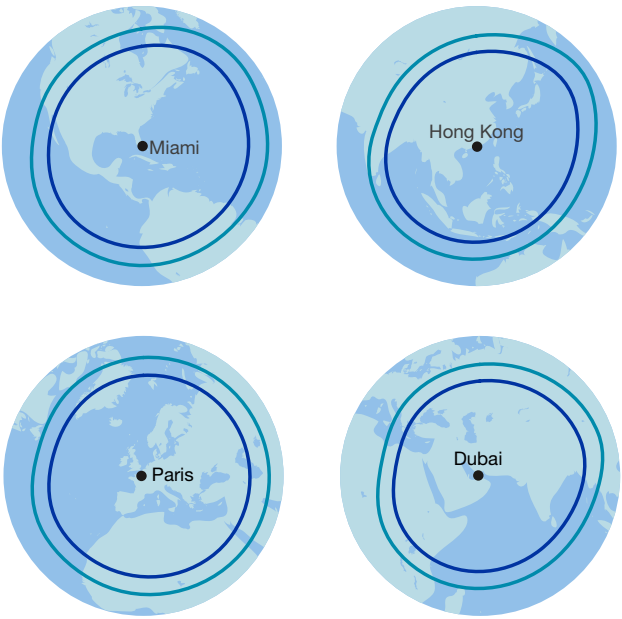
[1]With optional winglets
[2]3% fuel factor

Payload-range capability



- Standard rules
- 3% fuel factor
- Typical representative weights; actual weights will vary depending on individual feedstock configuration prior to conversion

Range capability from



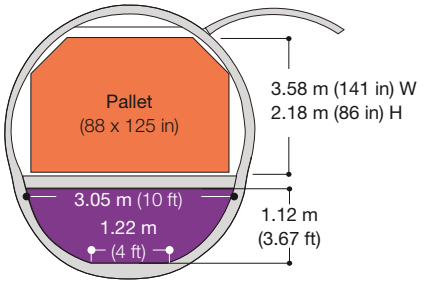
- Standard rules
- 3% fuel factor
- 50% annual winds
- Airways and traffic allowances included

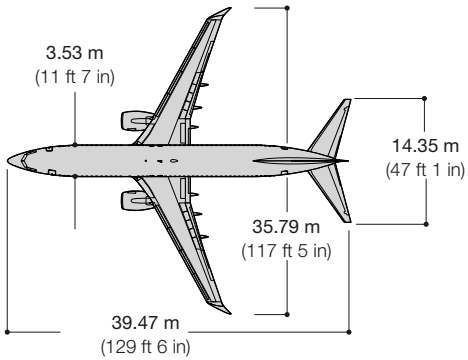
[1]Maximum revenue payload
[2]Volume-limited payload

737-800BCF[1]
79,000-kg (174,200-lb) MTOW
22,700-kg (50,100-lb) payload

737-800BCF[2]
79,000-kg (174,200-lb) MTOW
20,780-kg (45,820-lb) payload

737-800BCF





Principal characteristics

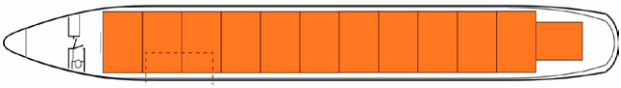
		Maximum
Maximum taxi weight[1]	kg (lb)	79,250 (174,700)
Maximum takeoff weight[1]	kg (lb)	79,000 (174,200)
Maximum landing weight[1]	kg (lb)	66,350 (146,300)
Maximum zero fuel weight[1]	kg (lb)	62,750 (138,300)
Volume limited payload[3]	kg (lb)	20,780 (45,820)
Maximum revenue payload[1]	kg (lb)	22,700 (50,100)
Fuel capacity	L (US gal)	26,025 (6,875)
Total cargo volume	m^3 (ft^3)	185.4 (6,546)
Design range (MTOW, volume limited payload)	km (nmi)	4,400 (2,375)
Design range (max revenue payload)	km (nmi)	3,750 (2,025)
Fuel consumed[2,3]	L per 100 tonne-km	23.0
Carbon emissions[2,3]	g CO_2 per tonne-km	583

- 3% fuel factor

[1]Typical representative weights; actual weights will vary depending on individual feedstock configuration prior to conversion
[2]1,000-km (540-nmi) trip
[3]Volume limited payload at 7 lb/ft^3 (112 kg/m^3) density

Cargo capability

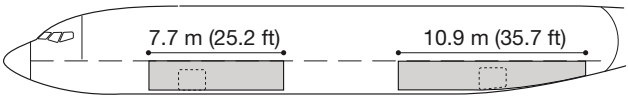
Main deck total volume, 141.4 m^3 (4,993 ft^3)



11 88- x 125-in pallets
1 AKE (LD-3) container

Lower hold

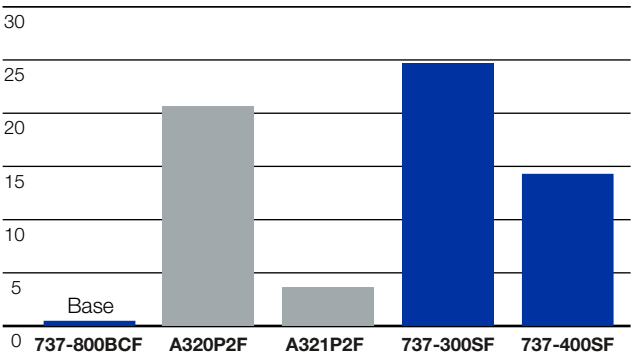
Total volume, 44.0 m^3 (1,553 ft^3) bulk cargo



Bulk volume	Forward	Aft
	19.3 m^3 (681 ft^3)	24.7 m^3 (872 ft^3)

Cash airplane-related operating costs

Relative ton-mile cost, %



- Standard rules
- 1,000-km (540-nmi) trip
- Volume limited payload at 7 lb/ft^3 (112 kg/m^3) density
- A321P2F with V2500 engines
- 3% fuel factor

737-800BCF engine options

Thrust rating BET, lb[1]

CFM56-7B24	23,700
CFM56-7B26	26,100
CFM56-7B27	27,100
CFM56-7B27/B1	28,400

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

757-200 Freighter
(out-of-production airplanes)

The 757-200 Freighter—the only 38-metric-ton production freighter—is the most cost-effective standard-body freighter on the market.

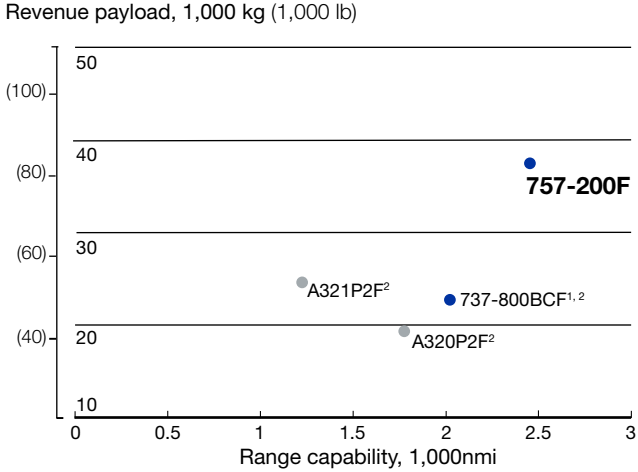
It is versatile enough to serve markets of nearly 3,000 nautical miles, and its performance from short and high fields in hot-weather climates is exceptional, enabling it to serve airports usually served only by smaller airplanes.

And thanks to its lightweight and superior aerodynamics, the 757-200F is one of the world's most fuel-efficient standard-body freighters.

The 757-200F has excellent loading characteristics and carries commonly used standard-body containers and pallets. As a member of the 757 family, it also shares a common flight deck, avionics, ground equipment, and spares with the 767, helping to keep fleet costs down and make operation simple and efficient.

The distinctive performance and profitability of the 757-200F make it the ideal replacement for older-generation, standard-body freighters.

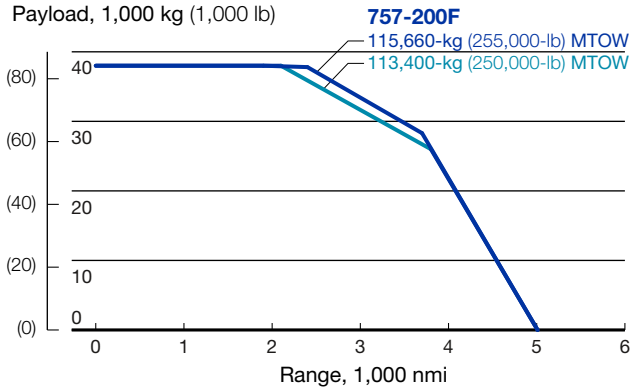
Boeing has a complete family of freighters



• A321P2F with V2500 engines

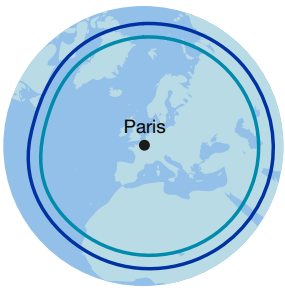
[1]With optional winglets
[2]3% fuel factor

Payload-Range Capability



- Standard rules
- Nominal performance
- Revenue payload

Range capability from

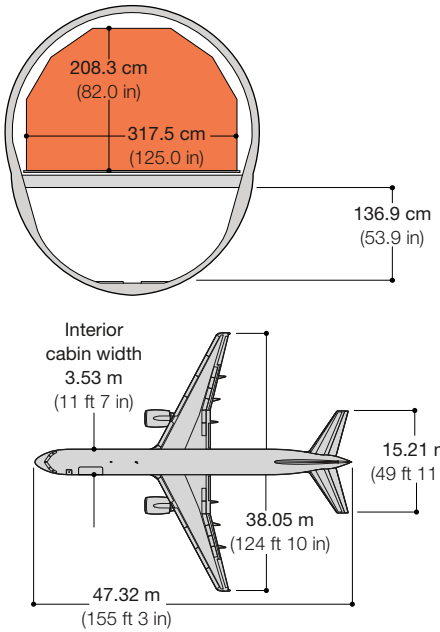


- Payload limited by maximum landing weight
- Standard rules
- 50% annual winds
- Airways and traffic allowances included

757-200F Maximum
115,660-kg (255,000-lb) MTOW
37,720-kg (83,170-lb) payload

757-200F Basic
113,400-kg (250,000-lb) MTOW
37,830-kg (83,410-lb) payload

757-200F out of production



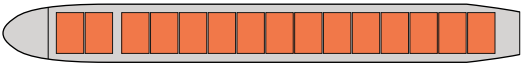
Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	113,850 (251,000)	116,120 (256,000)
Maximum takeoff weight	kg (lb)	113,400 (250,000)	115,660 (255,000)
Maximum landing weight	kg (lb)	95,250 (210,000)	95,250 (210,000)
Maximum zero fuel weight	kg (lb)	90,720 (200,000)	90,720 (200,000)
Maximum revenue payload[2]	kg (lb)	37,838 (83,419)	37,728 (83,176)
Fuel capacity	L (US gal)	43,490 (11,489)	43,490 (11,489)
Total cargo volume	m^3 (ft^3)	238.7 (8,430)	238.7 (8,430)
Design range[2]	km (nmi)	4,060 (2,190)	4,550 (2,455)
Fuel consumed[3]	L per 100 tonne-km	21.9	21.9
Carbon emissions[3]	g CO_2 per tonne-km	554	554

[1]Highest optional weight
[2]Payload limited by maximum landing weight
[3]1,000-km (549-nmi) trip

Cargo capacity

Main deck total volume, 186.9 m^3 (6,600 ft^3)



15 88- x 125-in main deck pallets

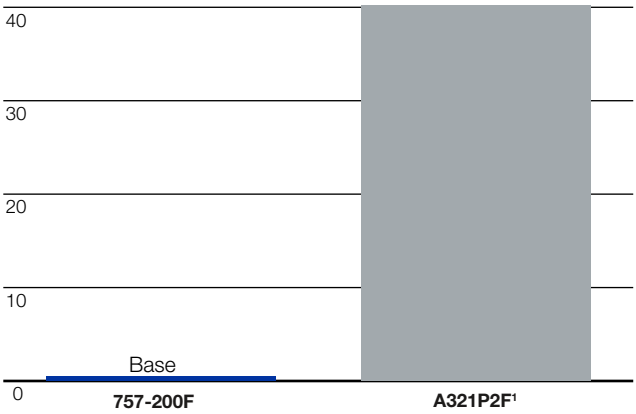
Lower hold

Total volume, 51.8 m^3 (1,830 ft^3) bulk cargo

	Forward	Aft
Bulk volume	19.8 m^3 (700 ft^3)	32.0 m^3 (1,130 ft^3)

Cash airplane-related operating costs

Relative ton-mile cost, %



- Standard rules
- 1,000-km (540-nmi) trip
- Maximum revenue payload
- A321P2F with V2500 engines

[1]3% fuel factor

757-200F engine options

Thrust rating BET, lb[1]

Pratt & Whitney	
PW2037	36,600
PW2040	40,100
Rolls-Royce	
RB211-535E4	40,200
RB211-535E4-B	43,500

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

767-300 Freighter

The 767-300 Freighter is based on the highly successful 767-300ER passenger variant and sets the standard as the world's most efficient medium widebody twinjet freighter. With its unrivaled combination of reliability and profitability, it shares the 767 family's well-deserved reputation for providing outstanding value to operators and investors alike.

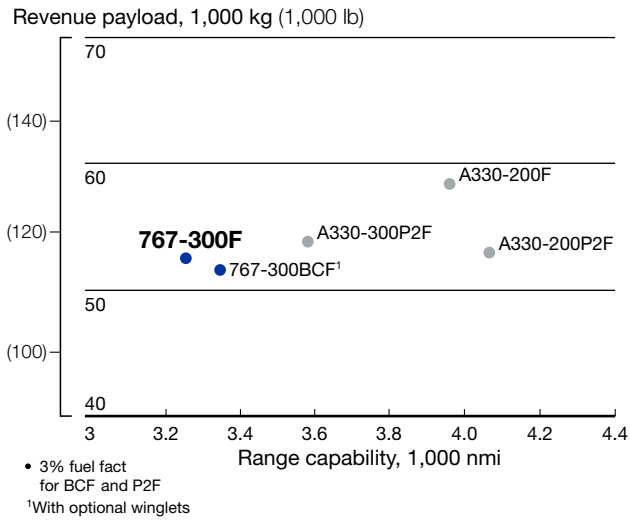
The 52.4-metric-ton (58-ton) 767-300F with international range is the ideal freighter for medium-sized cargo requirements and a perfect replacement for the DC-10 and MD-11. It has the ability to develop new markets in the long-haul, regional, and feeder markets.

The 767-300F is the perfect solution for the growing express cargo market, as it offers the lowest direct operating costs of any medium-sized freighter.

With its versatility, performance, and efficiency, the 767-300F is perfectly positioned to help operators meet the growing market. The 767-300F has excellent loading characteristics and carries commonly used standard-body containers and pallets. As a member of the 767 family, it also shares a common flight deck, avionics, ground equipment, and spares with the 757, helping to keep fleet costs down and make operation simple and efficient.

The 757 and 767 have a FAA related type rating and EASA same type rating for same pilot pool operations.

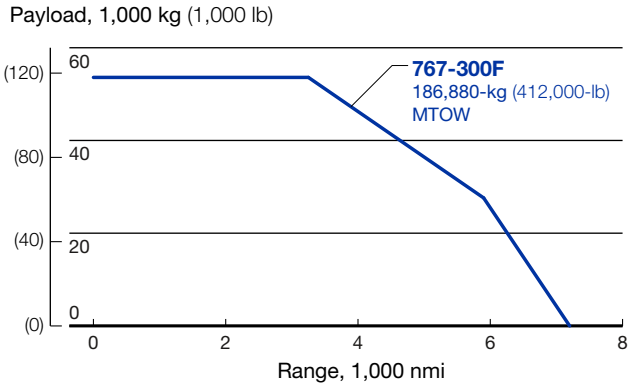
Boeing has a complete family of freighters



• 3% fuel fact for BCF and P2F

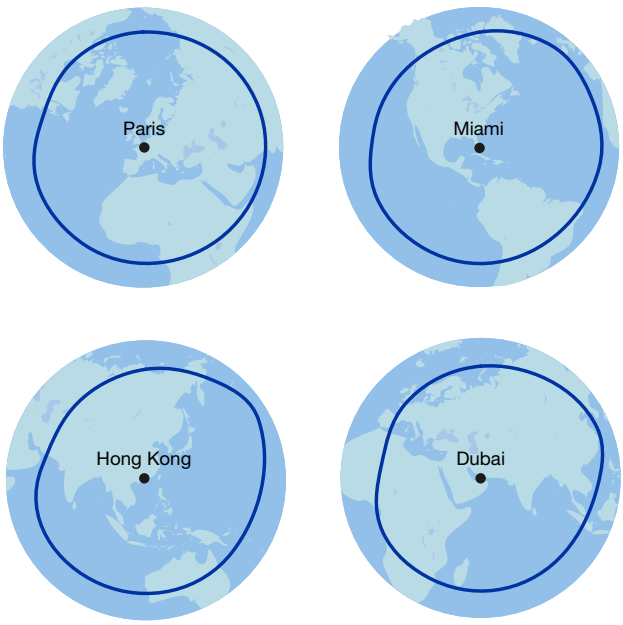
[1]With optional winglets

Payload-range capability



- Standard rules
- Nominal performance
- Revenue payload

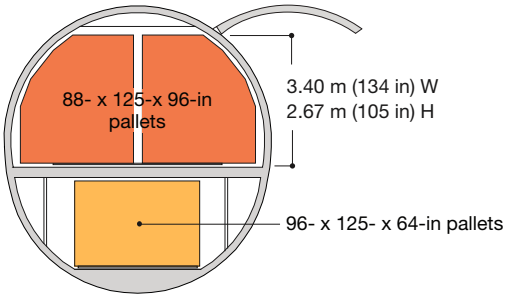
Range capability from

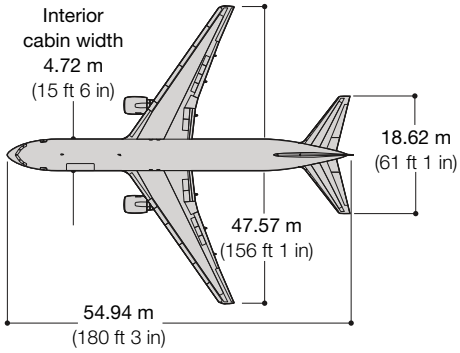


- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included

767-300 Freighter
186,880-kg (412,000-lb) MTOW
52,480-kg (115,700-lb) payload

767-300F





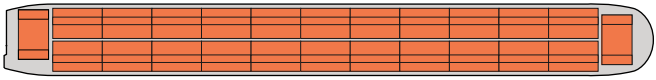
Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	185,510 (409,000)	187,330 (413,000)
Maximum takeoff weight	kg (lb)	185,060 (408,000)	186,880 (412,000)
Maximum landing weight	kg (lb)	147,870 (326,000)	147,870 (326,000)
Maximum zero fuel weight	kg (lb)	140,160 (309,000)	140,160 (309,000)
Maximum revenue payload	kg (lb)	52,480 (115,700)	52,480 (115,700)
Fuel capacity	L (US gal)	90,770 (23,980)	90,770 (23,980)
Cargo volume	m^3 (ft^3)	438.1 (15,469)	438.1 (15,469)
Design range	km (nmi)	5,790 (3,125)	6,030 (3,255)
Fuel consumed[2]	L per 100 tonne-km	15.3	15.3
Carbon emissions[2]	g CO_2 per tonne-km	389	389

[1]Highest optional weight
[2]2,000-nmi (3,700-km) trip

Cargo capability

Main deck total volume, 336.5 m^3 (11,884 ft^3)



24 88- x 125-in contoured pallets

Lower hold

Total volume, 101.6 m^3 (3,585 ft^3)[1]

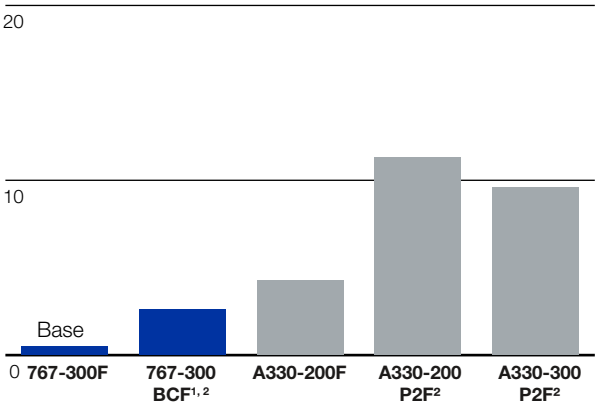
	Forward	Aft
Volume	47.0 m^3 (1,660 ft^3) 4 96- x 125-in pallets	42.4 m^3 (1,495 ft^3) 3 96- x 125-in pallets 2 LD-2s

- The 767-300F has 12.2 m^3 (430 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative ton-mile cost, %



- Standard rules
- 3,700-km (2,000-nmi) trip
- Volume-limited payload at 7 lb/ft^3 (112 kg/m^3) density

[1]With optional winglets
[2]3% fuel factor

767-300F engine options

Thrust rating BET, lb[1]

General Electric	
CF6-80C2B6F	60,200
CF6-80C2B7F	62,100

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

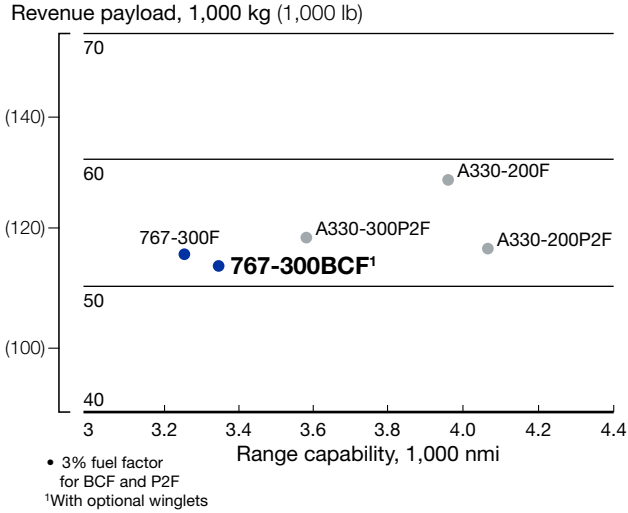
Freighter market

767-300BCF

The 767-300BCF is a great choice for airlines seeking to add air cargo revenue at a lower acquisition price and faster entry into service. Sharing maximum configuration and performance with the 767-300F production freighter and operational commonality and pilot type rating with all 757 and 767 airplane passenger and freighter variants, the 767-300BCF integrates smoothly into existing fleets, offering savings in operations, training, and maintenance. 767-300BCF is the ideal freighter for the growing express cargo market.

In addition, Boeing converted freighters give operators key advantages, including integrated manuals, world-class customer support, and superior schedule reliability compared to competing conversions.

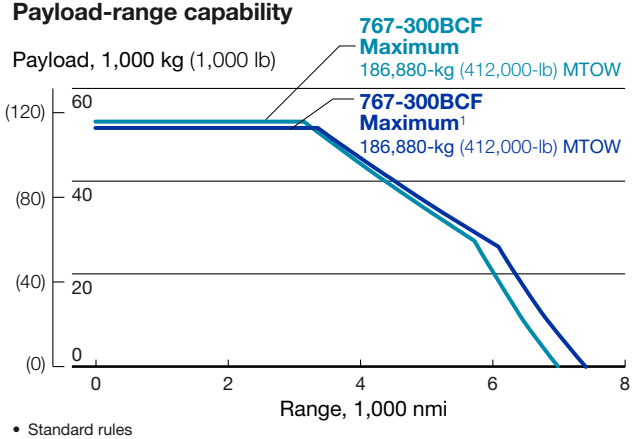
Boeing has a complete family of freighters



• 3% fuel factor for BCF and P2F

[1]With optional winglets

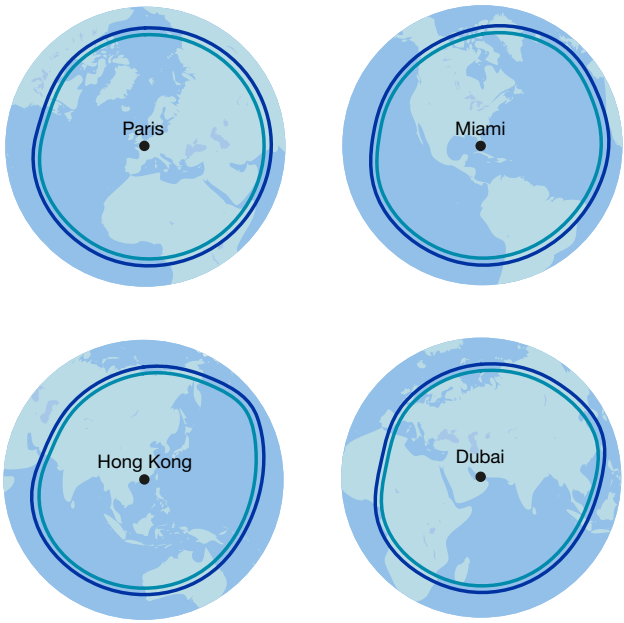
Payload-range capability



- Standard rules
- 3% fuel factor
- Revenue payload

[1]With optional winglets

Range capability from



- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

[1]With optional winglets

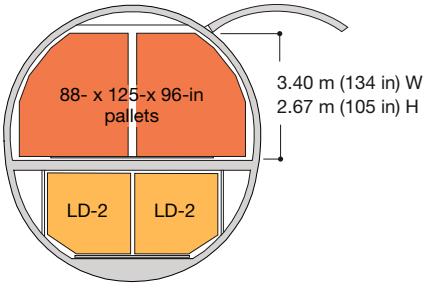
767-300BCF[1]

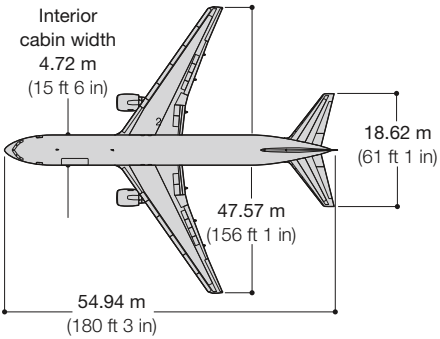
186,880-kg (412,000-lb) MTOW
51,660-kg (113,900-lb) payload

767-300BCF

186,880-kg (412,000-lb) MTOW
52,980-kg (116,800-lb) payload

767-300BCF





Principal characteristics

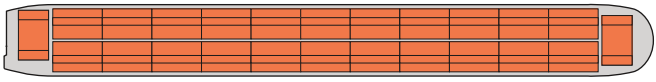
		Maximum[1]	Maximum[1,2]
Maximum taxi weight	kg (lb)	187,330 (413,000)	187,330 (413,000)
Maximum takeoff weight	kg (lb)	186,880 (412,000)	186,880 (412,000)
Maximum landing weight	kg (lb)	147,870 (326,000)	147,870 (326,000)
Maximum zero fuel weight	kg (lb)	140,160 (309,000)	140,160 (309,000)
Maximum revenue payload	kg (lb)	52,980 (116,800)	51,660 (113,900)
Fuel capacity	L (US gal)	90,640 (23,946)	90,640 (23,946)
Cargo volume	m^3 (ft^3)	445.3 (15,724)	445.3 (15,724)
Design range	km (nmi)	5,840 (3,155)	6,190 (3,345)
Fuel consumed[3]	L per 100 tonne-km	15.6	15.2
Carbon emissions[3]	g CO_2 per tonne-km	396	386

- 3% fuel factor

[1]Highest optional weight
[2]With optional winglets
[3]2,000-nmi (3,700-km) trip

Cargo capability

Main deck total volume, 336.5 m^3 (11,884 ft^3)



24 88- x 125-in contoured pallets

Lower hold

Total volume, 108.7 m^3 (3,840 ft^3)[1]

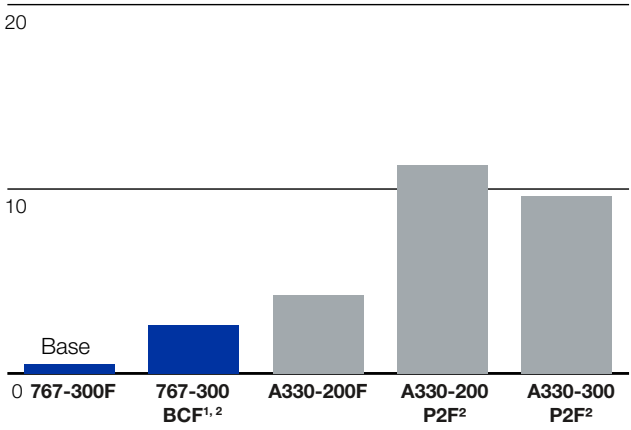
	Forward	Aft
Volume	47.0 m^3 (1,660 ft^3) 4 96- x 125-in pallets	49.6 m^3 (1,750 ft^3) 14 LD-2s

- The 767-300BCF has 12.2 m^3 (430 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative ton-mile cost, %



- Standard rules
- 3,700-km (2,000-nmi) trip
- Volume-limited payload at 7 lb/ft^3 (112 kg/m^3) density

[1]With optional winglets
[2]3% fuel factor

767-300BCF engine options

Thrust rating BET, lb[1]

General Electric	
CF6-80C2B2F	50,600
CF6-80C2B4F	56,500
CF6-80C2B6F	60,200
CF6-80C2B7F	62,100
Pratt & Whitney	
PW4052	52,300
PW4056	57,100
PW4060	60,200
PW4062	63,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

MD-11 Freighter
(out-of-production airplanes)

The three-engine widebody MD-11 Freighter is the world's most efficient 90-metric-ton freighter, offering long range, exceptional reliability—and proven profitability.

The freighter has extended, nonstop intercontinental range, lower fuel consumption per trip, and as much as 44 percent more capacity below deck for pallet or container cargo than its nearest competitor. Its higher structural weight enables more cargo payload for greater revenue potential.

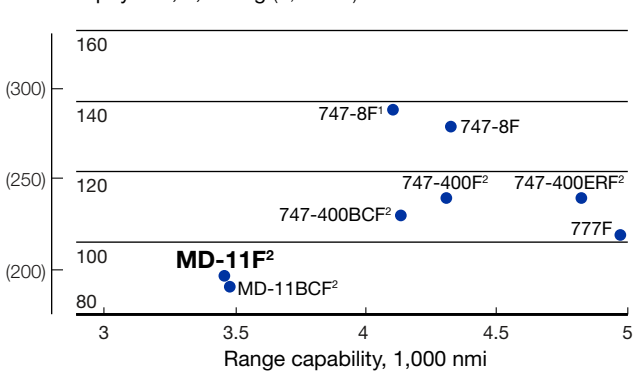
The flight deck and automatic system control substantially reduce pilot workload, allowing a two-person flight crew. Aerodynamic improvements—including winglets, a redesigned wing trailing edge, and a smaller horizontal tail with integral fuel tanks and extended tail cone—reduce drag, save fuel, and add range.

Compared with the competition, MD-11F also has 22 percent more cargo volume, with a revenue payload capability of approximately 200,000 pounds. The main deck accommodates more than 15,700 cubic feet of cargo on pallets; the lower compartments hold another 4,660 cubic feet of container and bulk cargo. All standard industry containers can be accommodated side by side in the lower deck.

Core engine commonality with the 767 and 747-400 simplifies maintenance and reduces operating and maintenance costs.

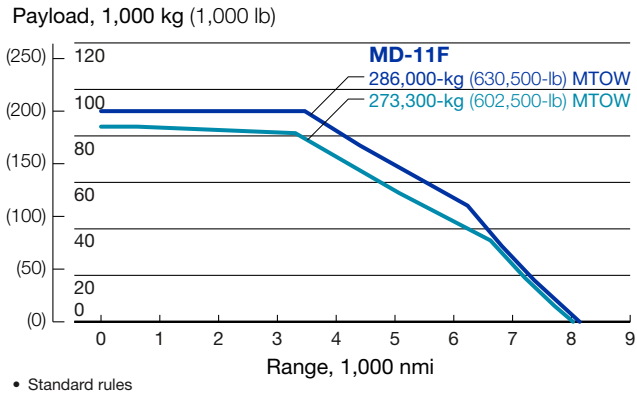
The MD-11F provides the economics, capacity, and range to meet market demand in an efficient trijet configuration.

Boeing has a complete family of freighters



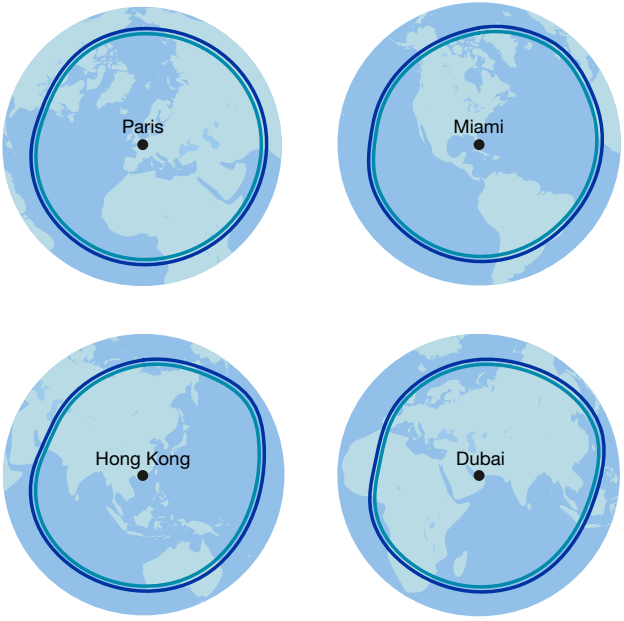
[1]Optional Alternate MZFW
[2]3% fuel factor

Payload-range capability



- Standard rules
- 3% fuel factor
- Revenue payload

Range capability from



- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowance included
- 3% fuel factor

[1]Payload limited by maximum landing weight

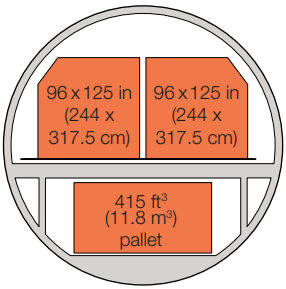
MD-11 Freighter Maximum

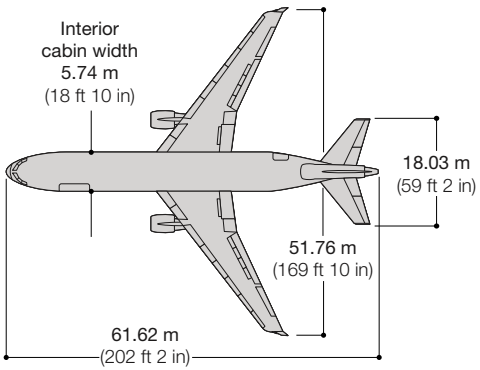
286,000-kg (630,500-lb) MTOW
90,300-kg (199,100-lb) payload

MD-11 Freighter Basic[1]

273,300-kg (602,500-lb) MTOW
81,300-kg (179,200-lb) payload

MD-11F out of production





Principal characteristics

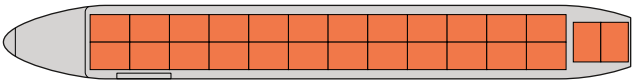
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	274,650 (605,500)	287,100 (633,000)
Maximum takeoff weight	kg (lb)	273,300 (602,500)	286,000 (630,500)
Maximum landing weight	kg (lb)	213,850 (471,500)	222,950 (491,500)
Maximum zero fuel weight	kg (lb)	204,700 (451,300)	209,250 (461,300)
Maximum revenue payload	kg (lb)	81,300 (179,200)[2]	90,300 (199,145)
Fuel capacity	L (US gal)	146,174 (38,615)	146,174 (38,615)
Cargo volume	m^3 (ft^3)	577 (20,378)	577 (20,378)
Design range	km (nmi)	6,120 (3,305)	6,425 (3,470)
Fuel consumed[3]	L per 100 tonne-km	13.8[2]	14.1
Carbon emissions[3]	g CO_2 per tonne-km	348[2]	357

- 3% fuel factor

[1]Highest optional weight
[2]Payload limited by maximum landing weight
[3]3,000-nmi (5,555-km) trip

Cargo capability

Main deck total volume, 445.1 m³ (15,718 ft³)



26 96- x 125-in pallets

Lower hold

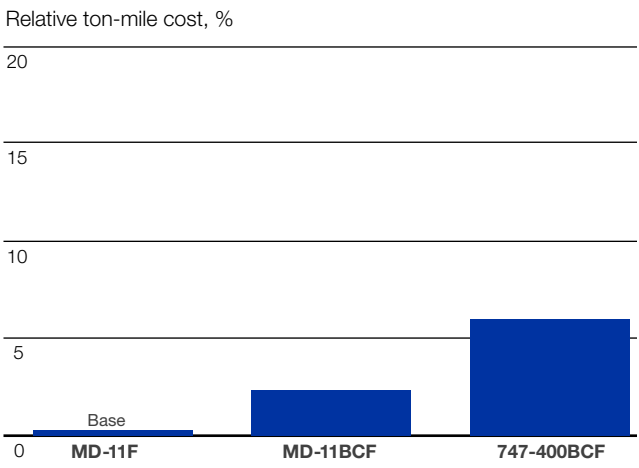
Total volume, 132 m³ (4,660 ft³)[1]

	Forward	Aft
Volume	70.6 m³ (2,490 ft³) 6 96- x 125-in pallets	47 m³ (1,660 ft³) 4 96- x 125-in pallets

- The MD-11F has 14.4 m³ (510 ft³) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs



- Standard rules
- 3,000-nmi (5,555-km) trip
- Maximum revenue payload
- 3% fuel factor

MD-11F engine options

Thrust rating BET, lb[1]

Pratt & Whitney		General Electric	
PW4460	60,000	CF6-80C2D1F	61,500
PW4462	62,000		

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

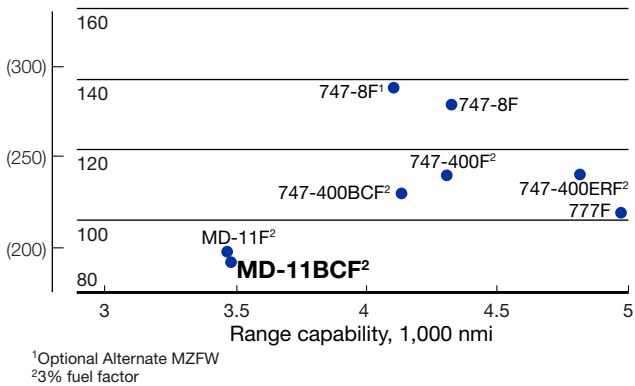
MD-11BCF

(out-of-production airplanes)

The MD-11BCF is an advanced trijet freighter that meets the demanding requirements of 80- to 88-metric-ton air cargo markets.

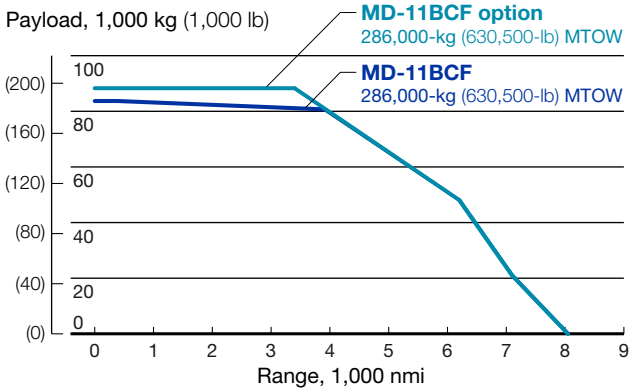
The payload and range capability of the MD-11BCF make it well-suited to express and high-density operations. The MD-11BCF offers a high-value converted freighter with low economic and schedule risk.

Boeing has a complete family of freighters



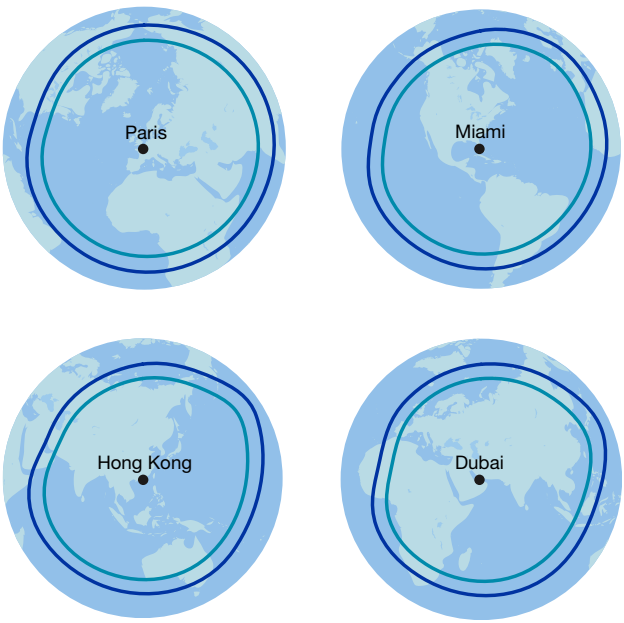
[1]Optional Alternate MZFW
[2]3% fuel factor

Payload-range capability



- Standard rules
- 3% fuel factor
- Revenue payload

Range capability from



- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

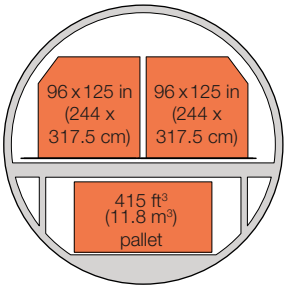
MD-11BCF

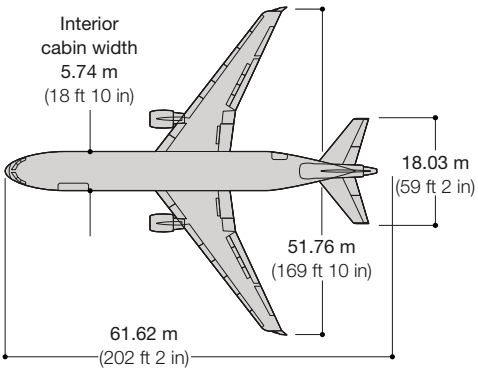
286,000-kg (630,500-lb) MTOW
81,000-kg (178,600-lb) payload

MD-11BCF Option

286,000-kg (630,500-lb) MTOW
88,300-kg (194,700-lb) payload

MD-11BCF out of production





Principal characteristics

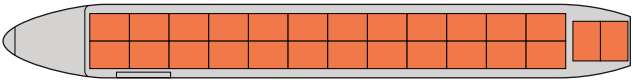
		Basic	Option[1]
Maximum taxi weight	kg (lb)	287,120 (633,000)	287,100 (633,000)
Maximum takeoff weight	kg (lb)	285,990 (630,500)	286,000 (630,500)
Maximum landing weight	kg (lb)	213,850 (471,500)	222,940 (491,500)
Maximum zero fuel weight	kg (lb)	204,700 (451,300)	209,240 (461,300)
Maximum revenue payload	kg (lb)	81,010 (178,600)[2]	88,300 (194,700)
Fuel capacity	L (US gal)	146,174 (38,615)	146,174 (38,615)
Cargo volume	m^3 (ft^3)	593.5 (20,958)	593.5 (20,958)
Design range	km (nmi)	7,310 (3,945)[2]	6,425 (3,470)
Fuel consumed[2]	L per 100 tonne-km	14.9[2]	14.1
Carbon emissions[2]	g CO_2 per tonne-km	378[2]	357

• 3% fuel factor

[1]Highest optional weight
[2]Payload limited by maximum landing weight
[3]3,000-nmi (5,555-km) trip

Cargo capability

Main deck total volume, 445.1 m³ (15,718 ft³)



26 96- x 125-in pallets

Lower hold

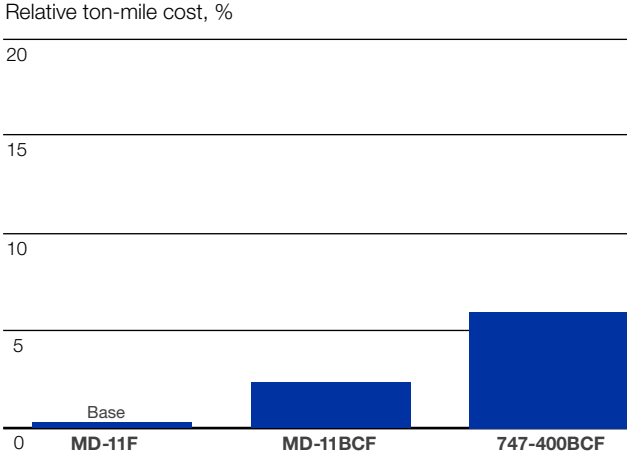
Total volume, 148.4 m³ (5,240 ft³)[1]

Volume	Forward	Aft
	70.6 m³ (2,490 ft³) 6 96- x 125-in pallets	63.4 m³ (2,240 ft³) 14 LD-3s

- The MD-11BCF has 14.4 m³ (510 ft³) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs



- Standard rules
- 3,000-nmi (5,555-km) trip
- Maximum revenue payload
- 3% fuel factor

MD-11BCF engine options

Thrust rating BET, lb[1]

Pratt & Whitney		General Electric	
PW4460	60,000	CF6-80C2D1F	61,500
PW4462	62,000		

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

777 Freighter

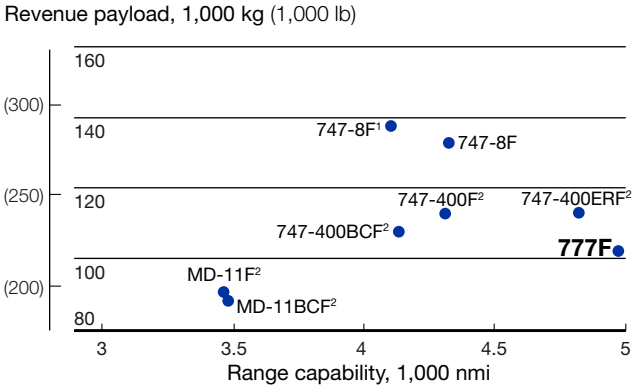
The 777 Freighter offers air cargo operators the lowest trip costs of any large freighter, and new product improvements lower fuel consumption even more. More efficient than the earlier-generation airplanes it is designed to replace, the 777 Freighter flies 4,970 nautical miles with a revenue payload capability of 102 metric tons (112 tons).

A large cargo door allows loading of 3-meter-high (10-foot-high) pallets, making it easier for 777 Freighter operators to transfer shipments from 747 Freighters as well as from land and sea transport modes. And because Boeing freighters are designed to carry real-world cargo densities, the 777 Freighter simplifies load-build and airplane weight-and-balance considerations.

The 777 Freighter offers air cargo operators key benefits and more value. Its range capability allows operators to capitalize on new high-yield, time-definite market opportunities. Together, longer stage lengths and a faster cruise speed maximize productivity for more profit. Wherever in the world the 777 Freighter flies, its aerodynamic and structural efficiency contribute to higher profitability. And because it's a 777—the world's most reliable widebody airplane family—the 777 Freighter helps operators avoid service disruptions day after day, year after year.

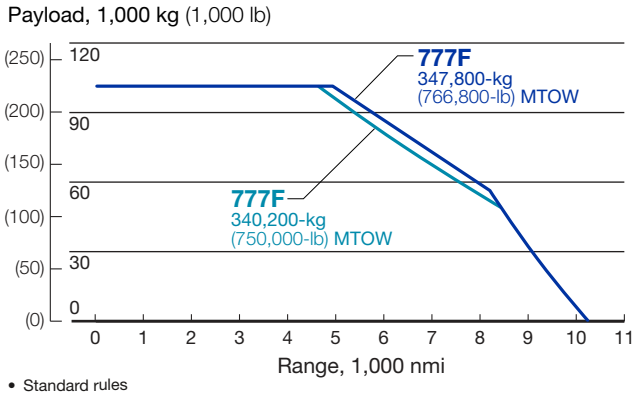
The fuel-efficient 777 Freighter meets stringent environmental standards for emissions. One of the quietest freighters in the sky, it also easily meets all current noise standards for flexible operations at noise-sensitive airports.

Boeing has a complete family of freighters



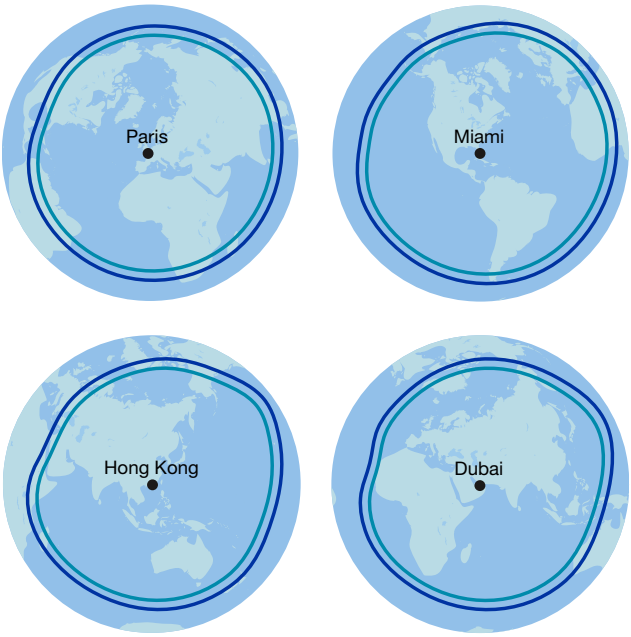
[1]Optional alternate MZFW
[2]3% fuel factor

Payload-range capability



- Standard rules
- Nominal performance
- Revenue payload

Range capability from



- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included

[1]Requires loading restrictions

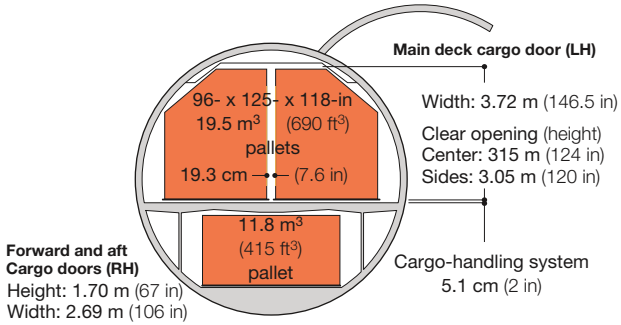
777 Freighter Maximum[1]

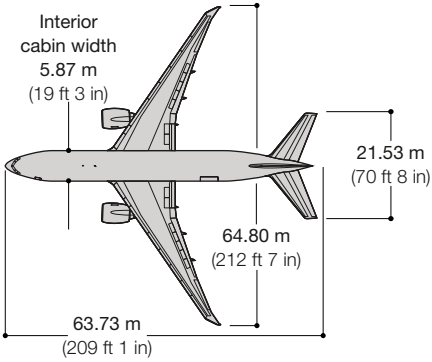
347,800-kg (766,800-lb) MTOW
102,000-kg (224,900-lb) payload

777 Freighter Basic

340,200-kg (750,000-lb) MTOW
102,000-kg (224,900-lb) payload

777 Freighter





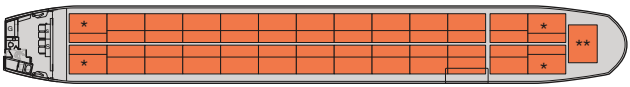
Principal characteristics

		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	341,100 (752,000)	348,700 (768,800)
Maximum takeoff weight	kg (lb)	340,200 (750,000)	347,800 (766,800)[2]
Maximum landing weight	kg (lb)	260,800 (575,000)	260,800 (575,000)
Maximum zero fuel weight	kg (lb)	248,100 (547,000)	248,100 (547,000)
Maximum revenue payload	kg (lb)	102,000 (224,900)	102,000 (224,900)
Fuel capacity	L (US gal)	181,283 (47,890)	181,283 (47,890)
Cargo volume	m^3 (ft^3)	652.7 (23,051)	652.7 (23,051)
Design range	km (nmi)	8,530 (4,605)	9,200 (4,970)
Fuel consumed[3]	L per 100 tonne-km	11.2	11.2
Carbon emissions[3]	g CO_2 per tonne-km	284	284

[1]Highest optional weight
[2]Loading restrictions apply
[3]3,000-nmi (5,555-km) trip

Cargo capacity

Main deck total volume, 518.2 m^3 (18,301 ft^3)



22 96- x 125-in x 118-in (10-ft) contoured pallets
*4 96- x 125-in x 116-in contoured pallets
**1 96- x 125-in x 96-in (8-ft) pallet

Lower hold

Total volume, 134.5 m^3 (4,750 ft^3)[1]

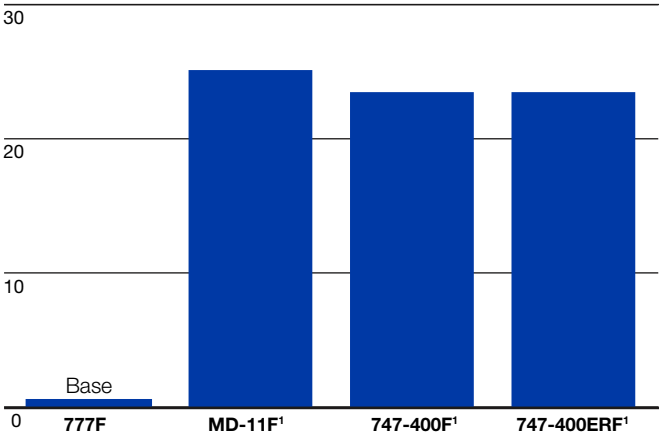
	Forward	Aft
Volume	70.5 m^3 (2,490 ft^3) 6 96- x 125- x 64-in pallets	47.0 m^3 (1,660 ft^3) 4 96- x 125- x 64-in pallets

- The 777 Freighter has 17.0 m^3 (600 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative ton-mile cost, %



- Standard rules
- 3,000-nmi (5,555-km) trip
- Maximum revenue payload

[1]3% fuel factor

777 Freighter engine options

Thrust rating BET, lb[1]

General Electric

GE90-110B1L	110,100
GE90-115BL	115,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

747-8 Freighter

The 747-8 Freighter offers cargo operators unmatched capability, capacity, and economics. With a structural payload capacity of 137 metric tons (151 tons), the 747-8F offers 16 percent more revenue cargo capacity than the 747-400F and low ton-mile costs for higher profit potential across the spectrum of 747 cargo markets.

Designed to fit within today's infrastructure, the 747-8F keeps introductory costs low. It easily integrates into existing 747-400 operations with a same pilot type rating between the two variants and uses the same ground-support equipment as all 747 freighters. And initial spares and training investment requirements are minimal.

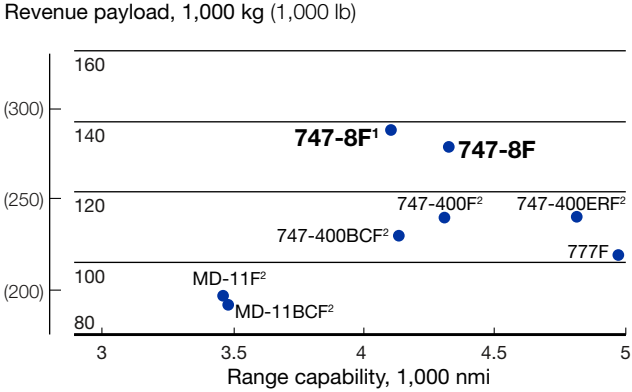
The 747-8F lets operators more easily adjust to seasonal and other variations in demand. Exceptional economics and market flexibility let them follow shifting market demand throughout the year for reduced economic risk and increased cargo yields.

Configuration is another advantage. In addition to a large side door that accommodates pallets loaded a full 10 feet high, the 747-8F nose door enables speedy straight-in loading of outsized loads. No other regularly scheduled commercial freighter—now in service or on the drawing board—can accommodate such a wide variety of high-yield cargoes.

Advanced engines and noise-reduction technologies help the environmentally progressive 747-8F score well below current emissions limits. Easily meeting the latest noise standards, the 747-8F satisfies stringent QC2 takeoff requirements at London's Heathrow airport.

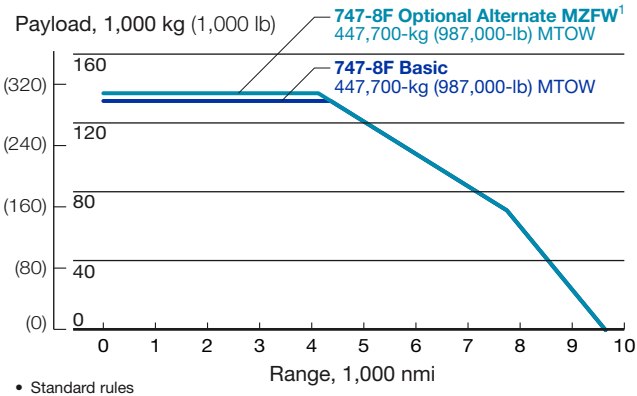
The backbone of global air cargo, 747 freighters carry half of all goods transported by air. The advanced-technology workhorse for the 21st century, the 747-8F promises to carry this proud heritage well into the future.

Boeing has a complete family of freighters



[1]Alternate MZFW option
[2]3% fuel factor

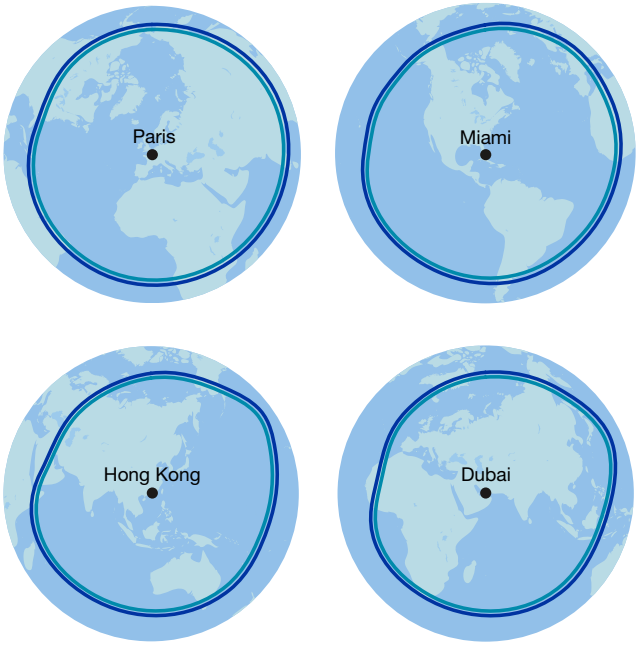
Payload-range capability



- Standard rules
- Revenue payload

[1]747-8F alternate MZFW option, loading restrictions may apply at high gross weights

Range capability from



- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included

[1]Optional alternate MZFW

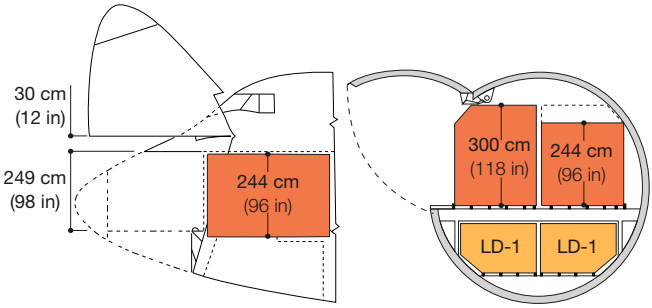
747-8 Freighter Basic

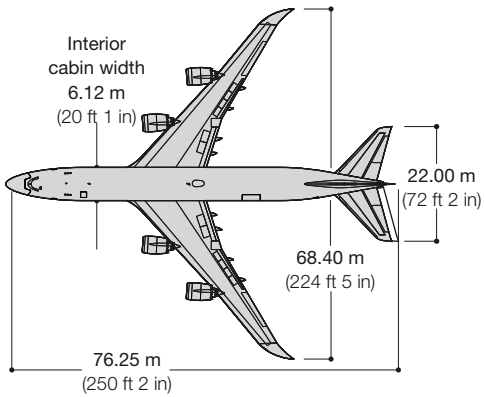
447,700-kg (987,000-lb) MTOW
133,100-kg (293,500-lb) payload

747-8 Freighter[1]

447,700-kg (987,000-lb) MTOW
137,750-kg (303,700-lb) payload

747-8F





Principal characteristics

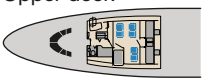
		Basic	Maximum[1]
Maximum taxi weight	kg (lb)	449,050 (990,000)	449,050 (990,000)
Maximum takeoff weight	kg (lb)	447,700 (987,000)	447,700 (987,000)
Maximum landing weight	kg (lb)	346,100 (763,000)	350,650 (773,000)
Maximum zero fuel weight	kg (lb)	329,750 (727,000)	334,300 (737,000)
Maximum revenue payload	kg (lb)	133,100 (293,500)	137,750 (303,700)
Fuel capacity	L (US gal)	226,118 (59,734)	226,118 (59,734)
Cargo volume	m^3 (ft^3)	857.7 (30,288)	857.7 (30,288)
Design range	km (nmi)	8,010 (4,325)	7,590 (4,100)
Fuel consumed[2]	L per 100 tonne-km	11.6	11.4
Carbon emissions[2]	g CO_2 per tonne-km	294	288

[1]Alternate MZFW option impacts loadability at high gross weights
[2]3,000-nmi (5,555-km) trip

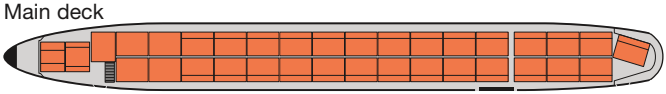
Cargo capability

Main deck total volume, 692.7 m^3 (24,462 ft^3)

Upper deck



Main deck



34 96- x 125-in pallets, including 27 10-ft-high units

Lower hold

Total volume, 165.0 m^3 (5,826 ft^3)[1]

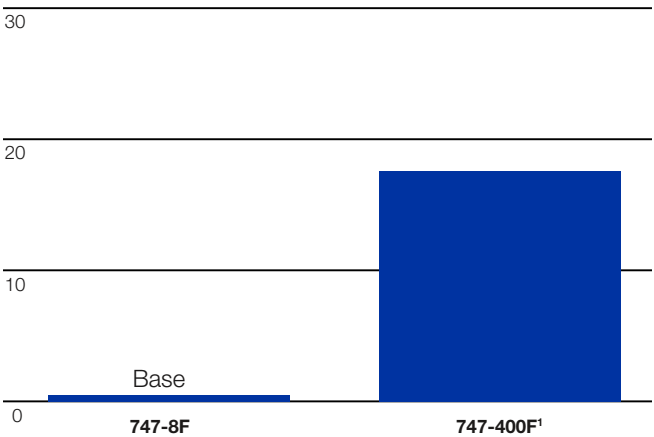
	Forward	Aft
Volume	82.3 m^3 (2,905 ft^3) 7 96- x 125-in pallets	68.7 m^3 (2,425 ft^3) 5 96- x 125-in pallets 2 LD-1s

- The 747-8F has 14.0 m^3 (496 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative ton-mile cost, %



- Standard rules
- 3,000-nmi (5,555-km) trip
- Maximum revenue payload

[1]3% fuel factor

747-8 Freighter engine options

Thrust rating BET, lb[1]

General Electric	
GEnx-2B67	66,500

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

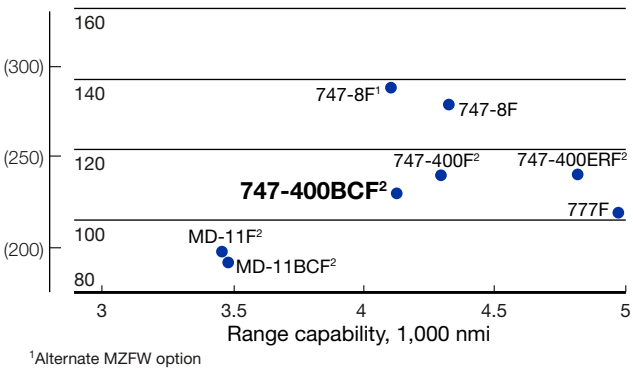
747-400BCF

(out-of-production airplanes)

A high-value large-freighter conversion, the 747-400BCF gives owners of 747-400s an excellent opportunity to extend the productive life of their airplanes well beyond the passenger-service career span. An economical solution with low financial risk, the 747-400BCF is ideal for expanding cargo fleets or replacing older, less-efficient cargo airplanes. With 108 metric tons of revenue payload capacity, the 747-400BCF delivers cost-effective large-freighter lift with low operating costs.

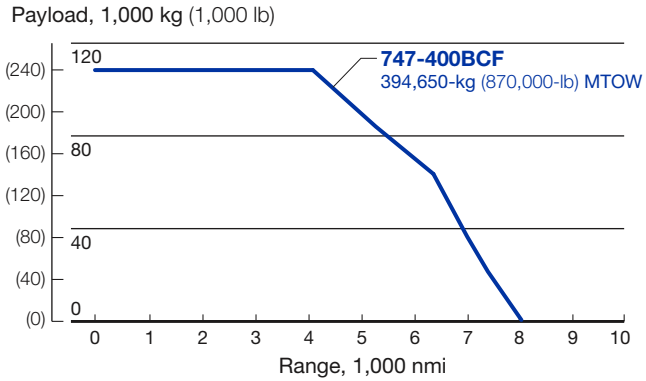
The 747-400BCF accommodates roughly the same cargo density as the 747-400F and the newest 747-8 Freighter. In addition, the 747-400BCF can take the same 3-meter-high (10-foot-high) cargo pallets as other 747 freighters, which facilitates complementary operations with the large freighters in the existing fleet. And the 747-400BCF uses today's airports and infrastructure, so it's ready to fly wherever large-freighter lift and efficiency are required.

Boeing has a complete family of freighters



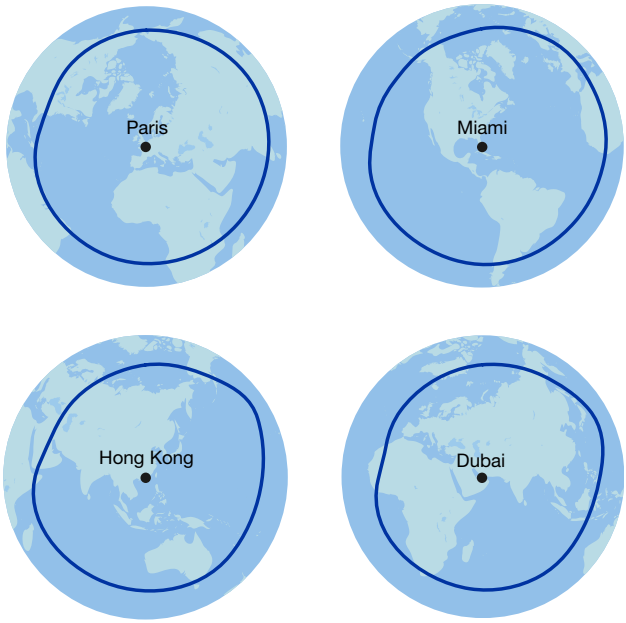
[1]Alternate MZFW option
[2]3% fuel factor

Payload-range capability



- Standard rules
- 3% fuel factor
- Revenue payload

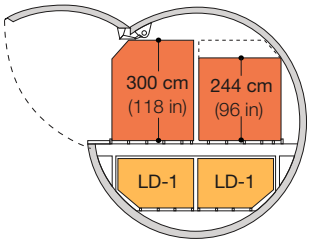
Range capability from

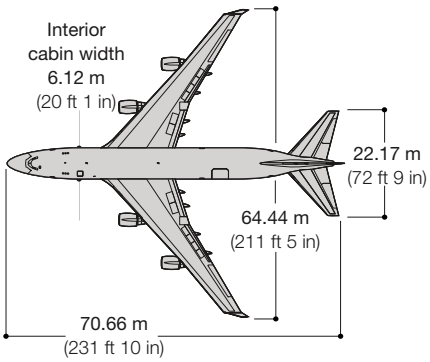


- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

747-400BCF
394,650-kg (870,000-lb) MTOW
108,000-kg (237,600-lb) payload

747-400BCF out of production





Principal characteristics

		Basic
Maximum taxi weight	kg (lb)	396,000 (873,000)
Maximum takeoff weight	kg (lb)	394,650 (870,000)
Maximum landing weight	kg (lb)	295,750 (652,000)
Maximum zero fuel weight	kg (lb)	276,690 (610,000)
Maximum revenue payload	kg (lb)	107,800 (237,600)
Fuel capacity	L (US gal)	203,523 (53,765)
Cargo volume	m^3 (ft^3)	710.7 (25,097)
Design range	km (nmi)	7,650 (4,130)
Fuel consumed[1]	L per 100 tonne-km	14.9
Carbon emissions[1]	g CO_2 per tonne-km	378

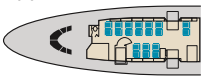
• 3% fuel factor

[1]3,000-nmi (5,555-km) trip

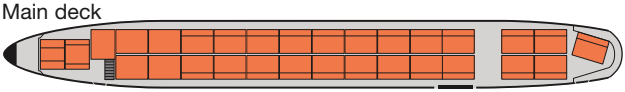
Cargo capability

Main deck total volume, 585.4 m^3 (20,674 ft^3)

Upper deck



Main deck



30 96- x 125-in pallets, including 21 10-ft-high units

Lower hold

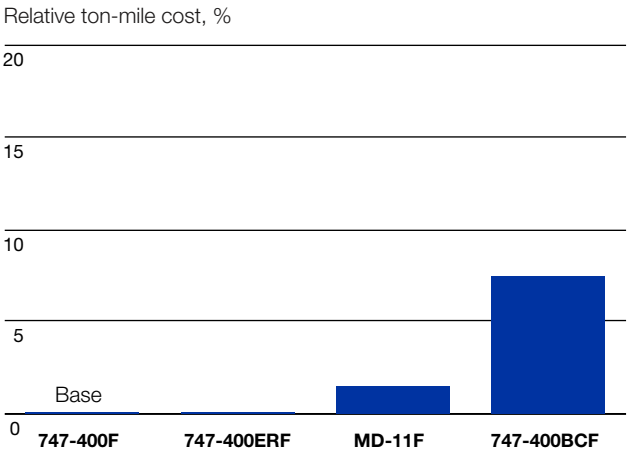
Total volume, 125.3 m^3 (4,423 ft^3)[1]

	Forward	Aft
Volume	58.8 m^3 (2,075 ft^3) 5 96- x 125-in pallets	47.0 m^3 (1,660 ft^3) 4 96- x 125-in pallets

- The 747-400BCF has 19.5 m^3 (688 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs



- Standard rules
- 3,000-nmi (5,555-km) trip
- Maximum revenue payload
- 3% fuel factor

747-400BCF engine options

Thrust rating BET, lb[1]

General Electric		Rolls-Royce	
CF6-80C2B1F	56,500	RB211-524G2-T	56,400
CF6-80C2B5F	62,100	RB211-524H2-T	59,500

Pratt & Whitney	
PW4056	57,100
PW4062	63,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

Freighter market

747-400/-400ER Freighter
(out-of-production airplanes)

The most successful intercontinental freighters in the world, the 747-400 Freighters provide nearly half of the world's total freighter capacity.

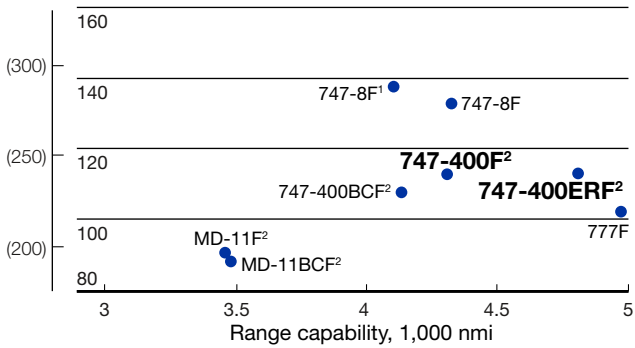
And they're economical: they have 20 percent lower operating costs per ton-mile and 14 percent better fuel consumption per ton-mile of payload than that of earlier versions.

Among their strengths,

- Cargo doors on the main deck nose and side make it easy to load cargo quickly and efficiently, increasing profitability. The exclusive nose door easily accommodates oversized cargo, reducing loading time.
- On the main deck, they accommodate 30 industry-standard pallets or containers. As many as 23 units can be 10 feet (3 meters) high. In the aft lower hold, they accommodate two additional containers.
- They're capable of carrying outsized, high-value cargo, which generates increased revenue.
- The 747-400ER Freighter has a payload capability similar to that of the 747-400 Freighter but with an additional 525 nautical miles of range capability.

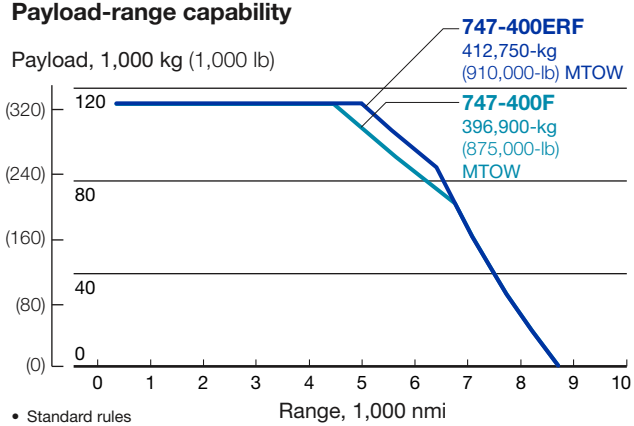
The 747-400 and 747-400ER Freighters are members of the fastest long-range commercial airplane family in the world. They offer an unrivaled combination of capacity, range, and economics—valuable reasons that they are flown by 50 airlines and serve 130 of the world's major airports.

Boeing has a complete family of freighters



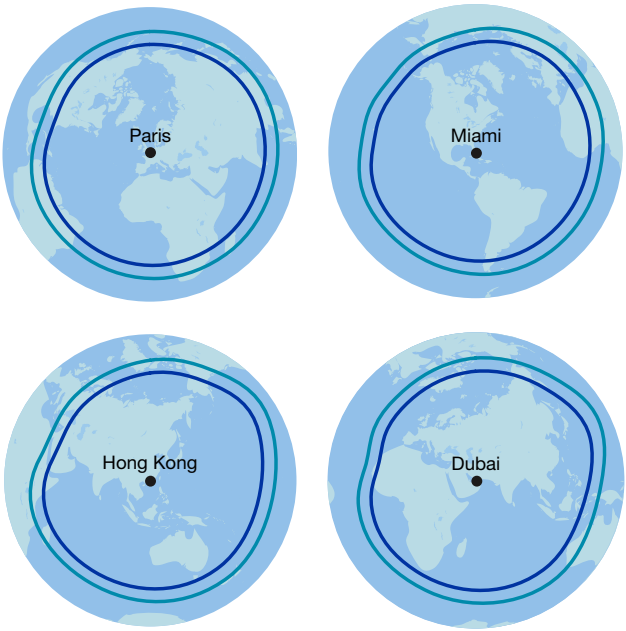
[1]Alternate MZFW option
[2]3% fuel factor

Payload-range capability



- Standard rules
- 3% fuel factor
- Maximum revenue payload

Range capability from

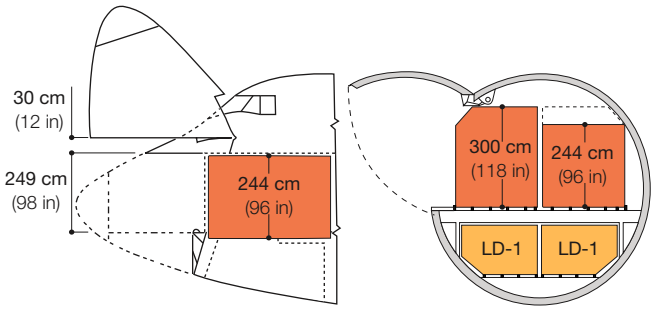


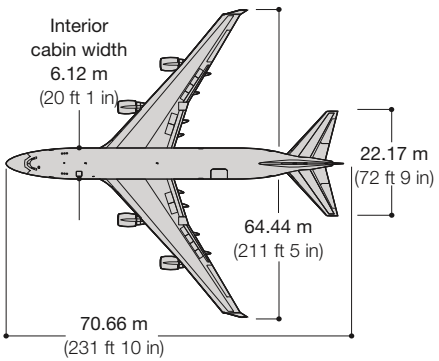
- Maximum revenue payload
- Standard rules
- 50% annual winds
- Airways and traffic allowances included
- 3% fuel factor

747-400ER Freighter
412,750-kg (910,000-lb) MTOW
113,100-kg (249,400-lb) payload

747-400 Freighter
396,900-kg (875,000-lb) MTOW
113,000-kg (249,100-lb) payload

747-400F out of production





Principal characteristics

		Basic	Maximum[1]	
Maximum taxi weight	kg (lb)	364,250 (803,000)	398,250 (878,000)	369,220 (814,000)
Maximum takeoff weight	kg (lb)	362,850 (800,000)	396,900 (875,000)	367,860 (811,000)[2]
Maximum landing weight	kg (lb)	295,750 (652,000)	295,750 (652,000)	302,090 (666,000)
Maximum zero fuel weight	kg (lb)	276,700 (610,000)	276,700 (610,000)	288,030 (635,000)
Maximum revenue payload	kg (lb)	113,000 (249,100)	113,000 (249,100)	124,330 (274,100)
Fuel capacity				
P&W and Rolls-Royce engines	L (US gal)	204,355 (53,985)		
GE engines	L (US gal)	203,520 (53,765)		
Cargo volume	m^3 (ft^3)	738.1 (26,067)		
Design range	km (nmi)	5,910 (3,190)	7,970 (4,305)	5,230 (2,825)
Fuel consumed[3]	L per 100 tonne-km	14.0	14.0	N/A
Carbon emissions[3]	g CO_2 per tonne-km	355	355	N/A

• 3% fuel factor

[1]Highest optional weight

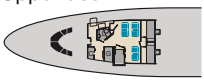
[2]Operating restriction on takeoff weight when zero fuel weight exceeds 610,000 lb; that is, maximum takeoff is reduced linearly from 875,000 to 811,000 lb between zero fuel weights of 610,000 and 635,000 lb

[3]3,000-nmi (5,555-km) trip

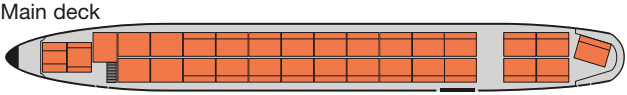
Cargo capability

Main deck total volume, 607.7 m^3 (21,462 ft^3)

Upper deck



Main deck



30 96- x 125-in pallets, including 23 10-ft-high units

Lower hold

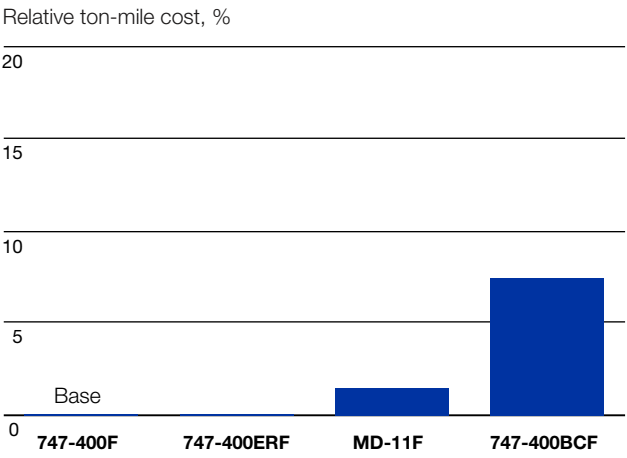
Total volume, 130.4 m^3 (4,605 ft^3)[1]

	Forward	Aft
Volume	58.8 m^3 (2,075 ft^3) 5 96- x 125-in pallets	56.9 m^3 (2,010 ft^3) 4 96- x 125-in pallets 2 LD-1s or LD-3s

- The 747-400F has 14.7 m^3 (520 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs



- Standard rules
- 3,000-nmi (5,555-km) trip
- Maximum revenue payload
- 3% fuel factor

747-400F engine options

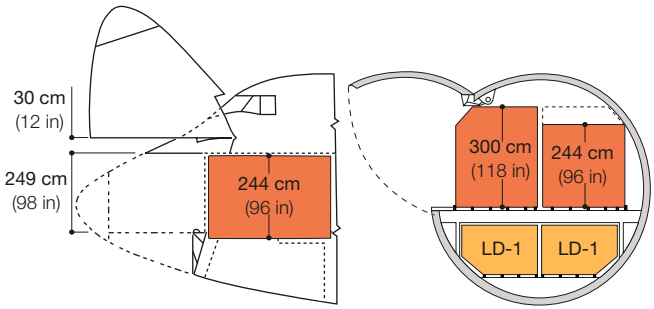
Thrust rating BET, lb[1]

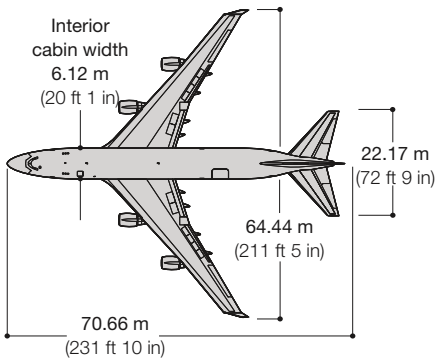
General Electric		Rolls-Royce	
CF6-80C2B1F	56,500	RB211-524G2-T	56,400
CF6-80C2B5F	62,100	RB211-524H2-T	59,500

Pratt & Whitney	
PW4056	57,100
PW4062	63,000

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

747-400ERF out of production





Principal characteristics

		Basic	Optional MZFW[1]
Maximum taxi weight	kg (lb)	**414,150** (913,000)	**369,220** (814,000)
Maximum takeoff weight	kg (lb)	**412,750** (910,000)	**367,860** (811,000)[2]
Maximum landing weight	kg (lb)	**296,200** (653,000)	**302,090** (666,000)
Maximum zero fuel weight	kg (lb)	**277,150** (611,000)	**288,030** (635,000)
Maximum revenue payload	kg (lb)	**113,100** (249,400)	**124,000** (273,400)
Fuel capacity			
P&W and Rolls-Royce engines	L (US gal)	**204,350** (53,985)	
GE engines	L (US gal)	**203,520** (53,765)	
Cargo volume	m^3 (ft^3)	**738.1** (26,067)	
Design range	km (nmi)	**8,920** (4,815)	**5,230** (2,825)
Fuel consumed[3]	L per 100 tonne-km	14.0	N/A
Carbon emissions[3]	g CO_2 per tonne-km	356	N/A

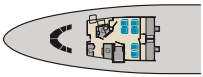
• 3% fuel factor

[1]Highest optional weight
[2]Operating restriction on takeoff weight when zero fuel weight exceeds 611,000 lb; that is, maximum takeoff is reduced linearly from 910,000 to 811,000 lb between zero fuel weights of 611,000 and 635,000 lb
[3]3,000-nmi (5,555-km) trip

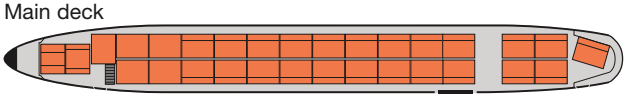
Cargo capability

Main deck total volume, 607.7 m^3 (21,462 ft^3)

Upper deck



Main deck



30 96- x 125-in pallets, including 23 10-ft-high units

Lower hold

Total volume, 130.4 m^3 (4,605 ft^3)[1]

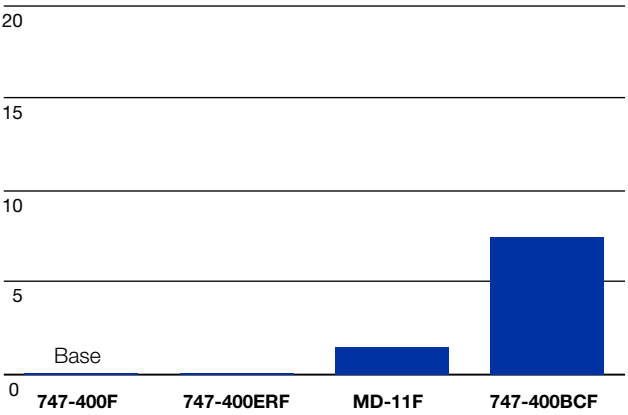
	Forward	Aft
Volume	58.8 m^3 (2,075 ft^3) 5 96- x 125-in pallets	56.9 m^3 (2,010 ft^3) 4 96- x 125-in pallets 2 LD-1s or LD-3s

- The 747-400ERF has 14.7 m^3 (520 ft^3) of bulk cargo

[1]Includes bulk cargo

Cash airplane-related operating costs

Relative ton-mile cost, %



- Standard rules
- 3,000-nmi (5,555-km) trip
- Maximum revenue payload
- 3% fuel factor

747-400ERF engine options

Thrust rating BET, lb[1]

General Electric		Pratt & Whitney	
CF6-80C2B5F	62,100	PW4062	63,300

[1]BET (Boeing-equivalent thrust) is based on takeoff installed net thrust at Mach 0.25; it is included only as reference, not as a guarantee of performance

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