

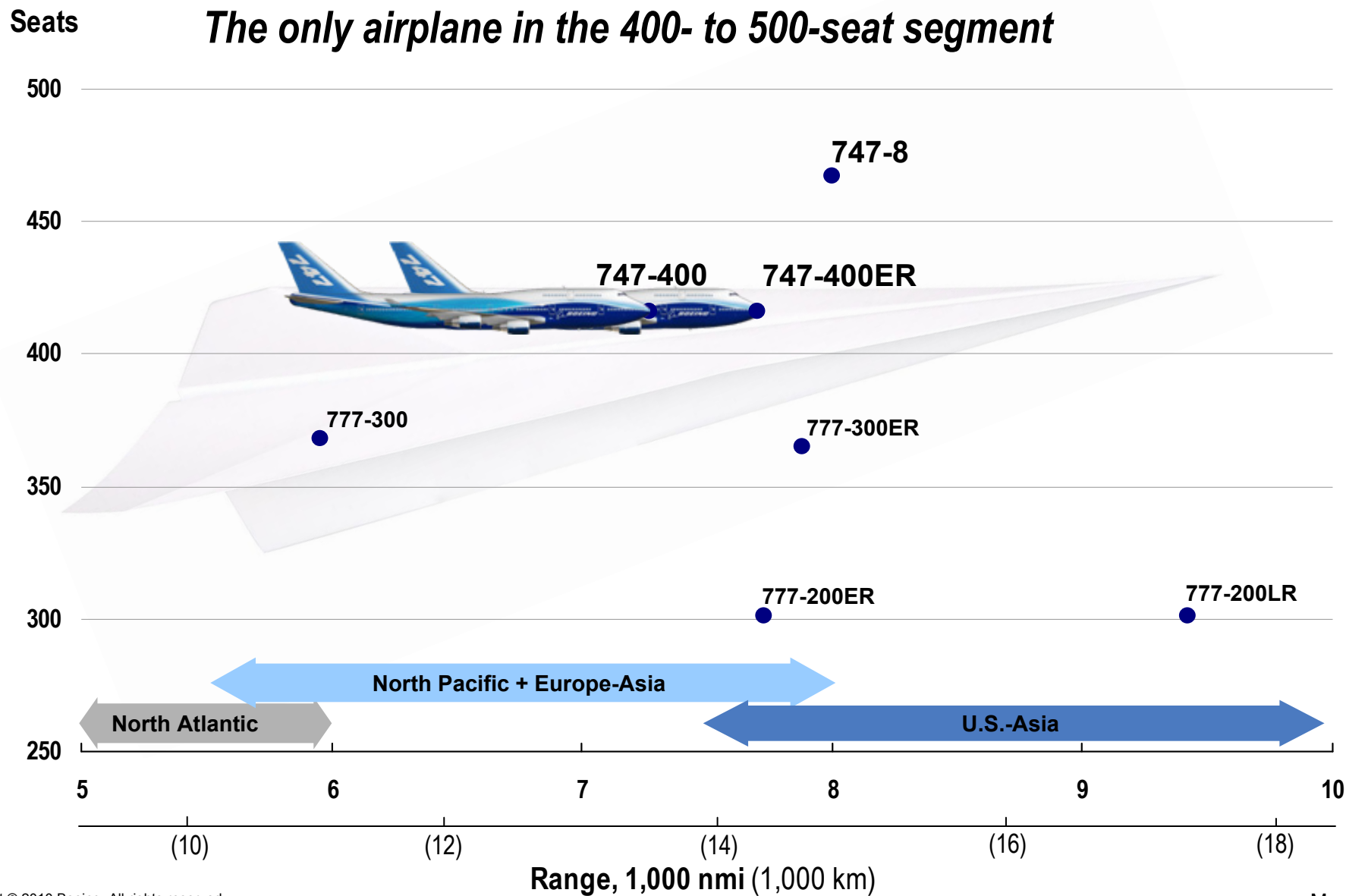
The right choice for the large airplane market

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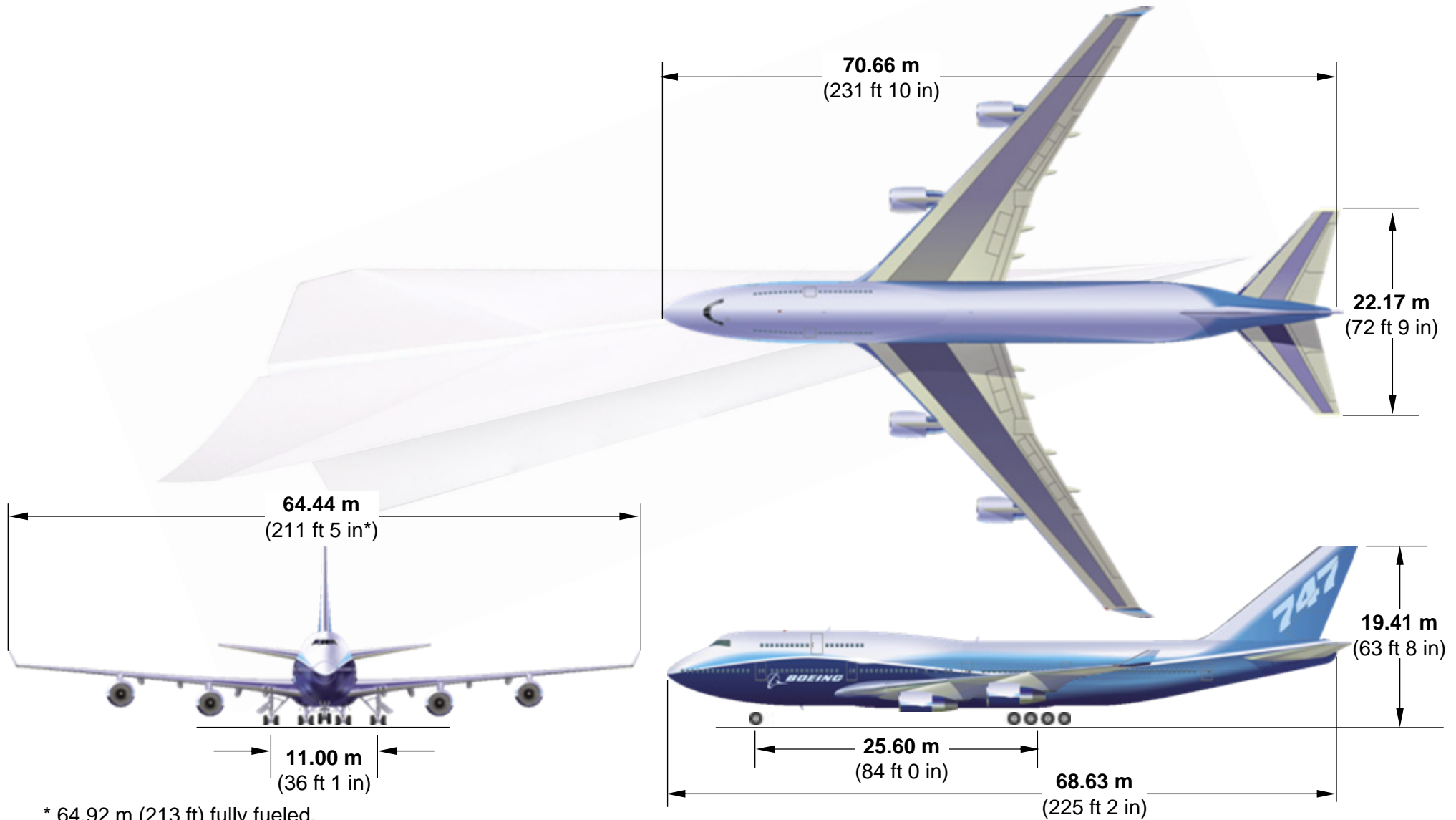
The 747 family plan

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747-400/-400ER

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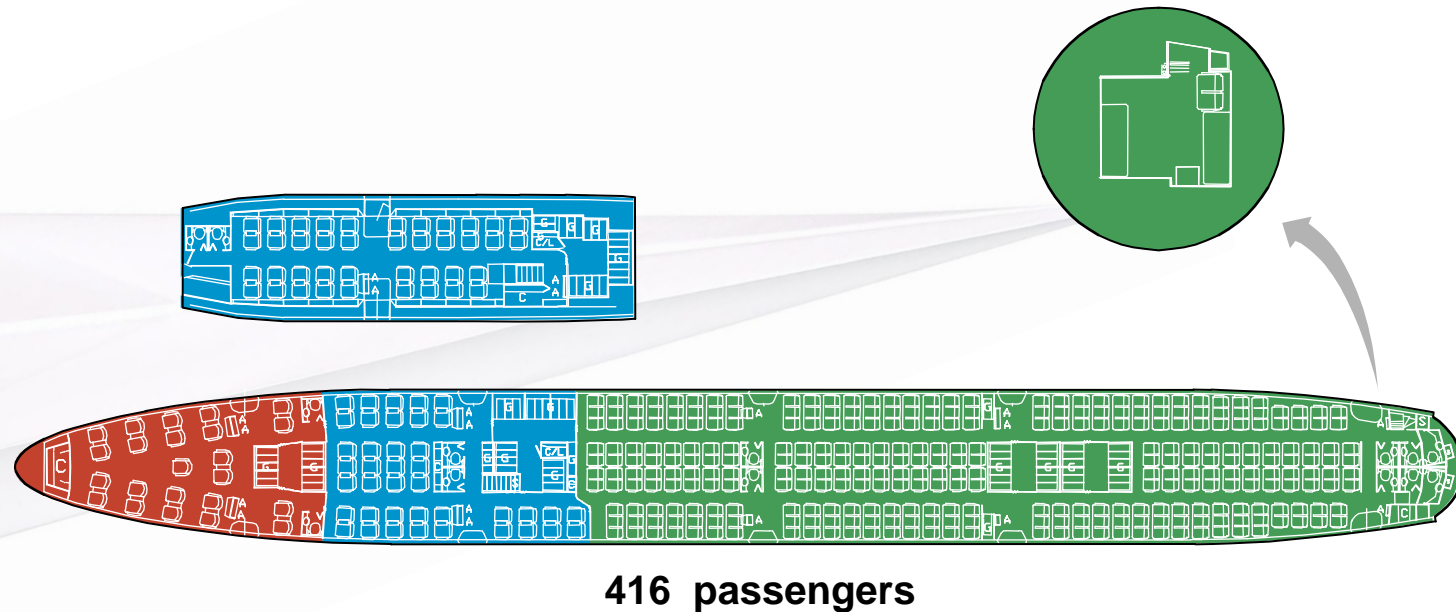
* 64.92 m (213 ft) fully fueled.

747-400/-400ER Interior arrangement

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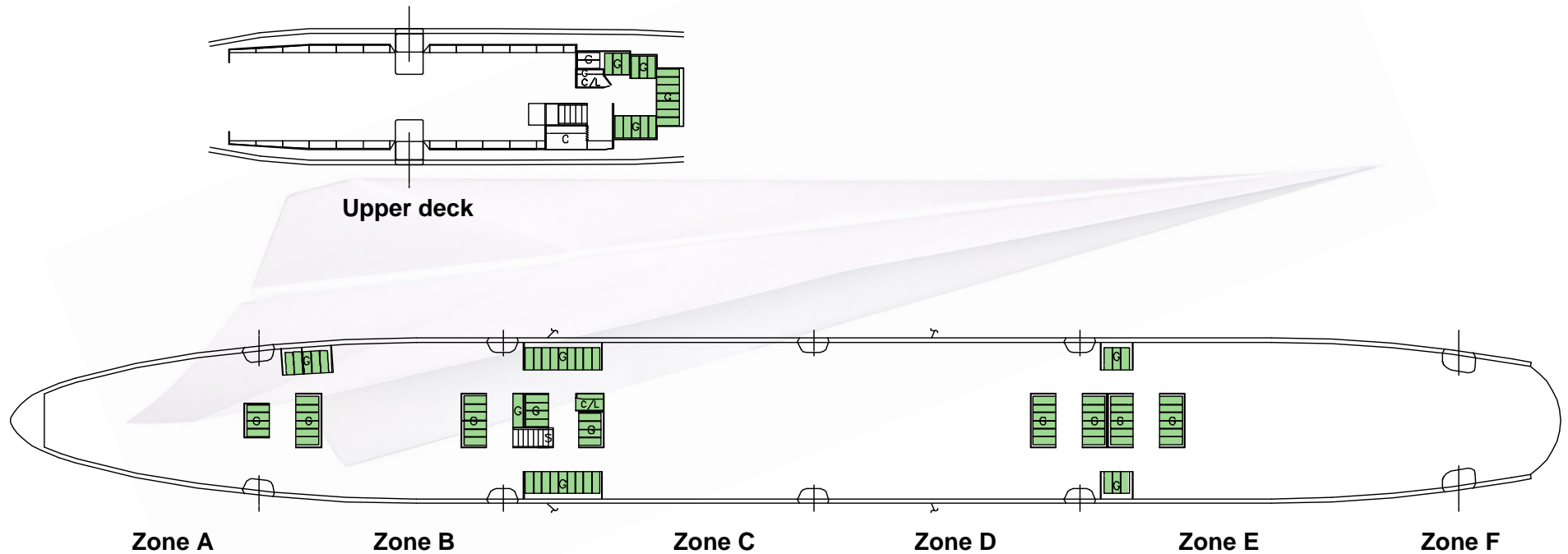
Three-class seating, long-range rules

747-400/-400ER
23 first at 61-in pitch
80 business at 39-in pitch
313 economy at 32-in pitch



747-400/-400ER Standard galley locations

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747-400/-400ER Standard lavatory locations

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747-400/-400ER

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Zone A



747-400/-400ER

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Upper deck business class



747-400/-400ER

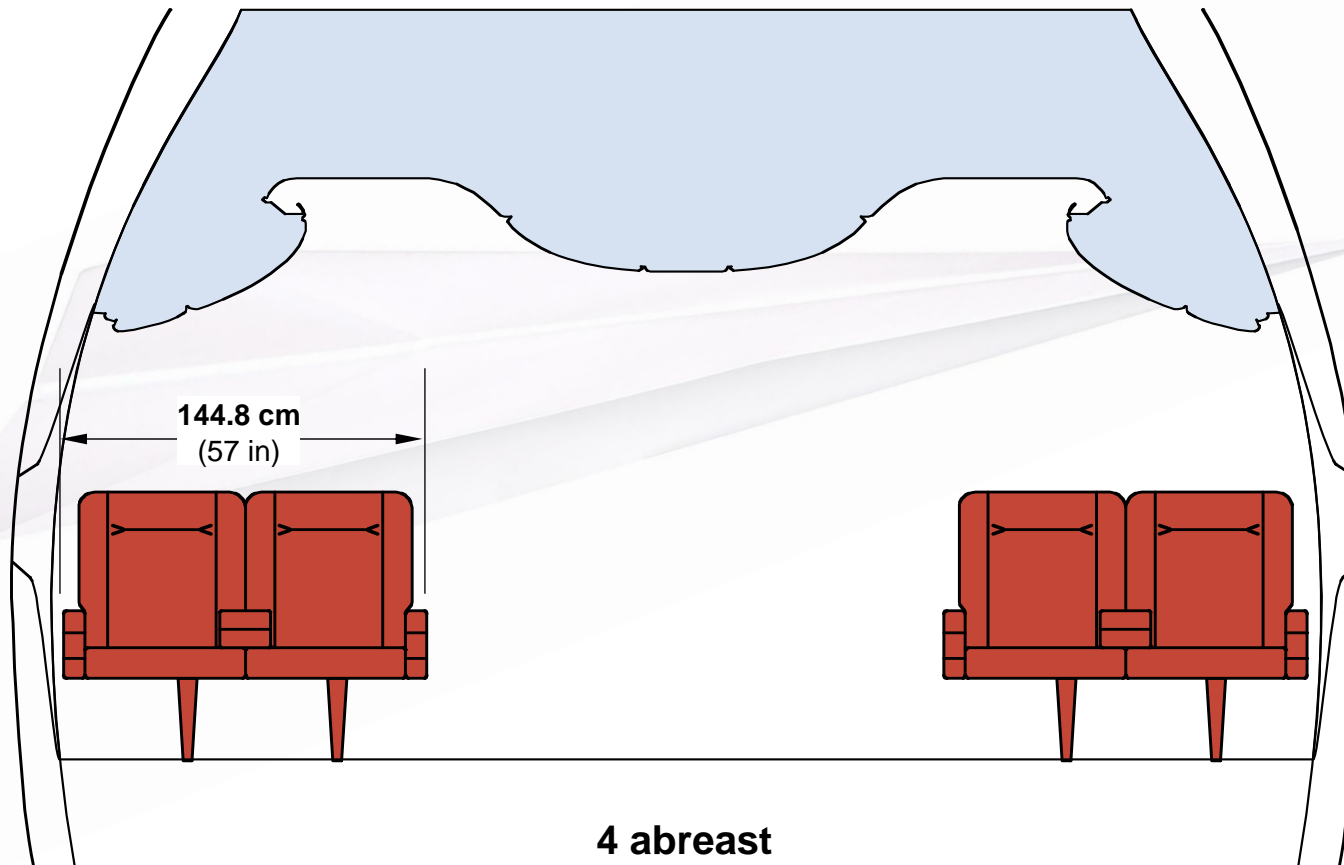
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Main deck economy class



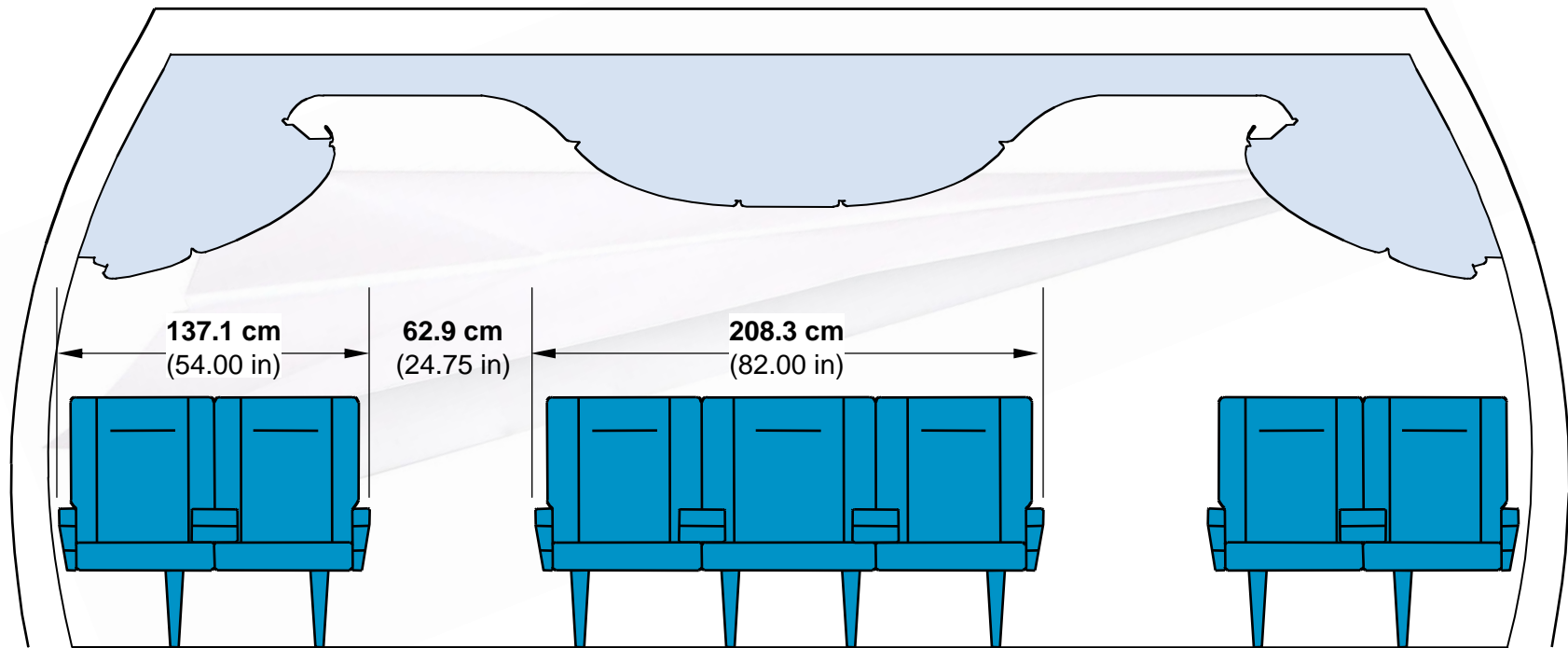
747-400/-400ER First-class

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747-400/-400ER Business-class

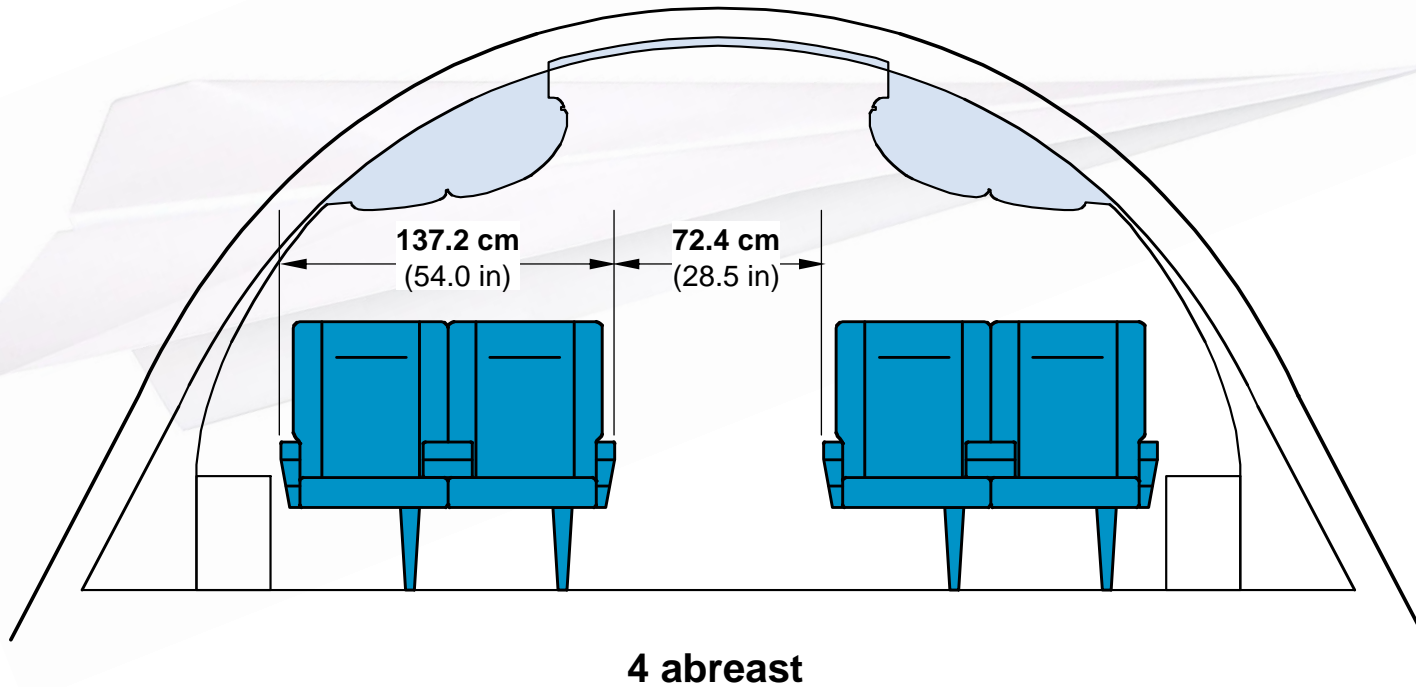
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7 abreast

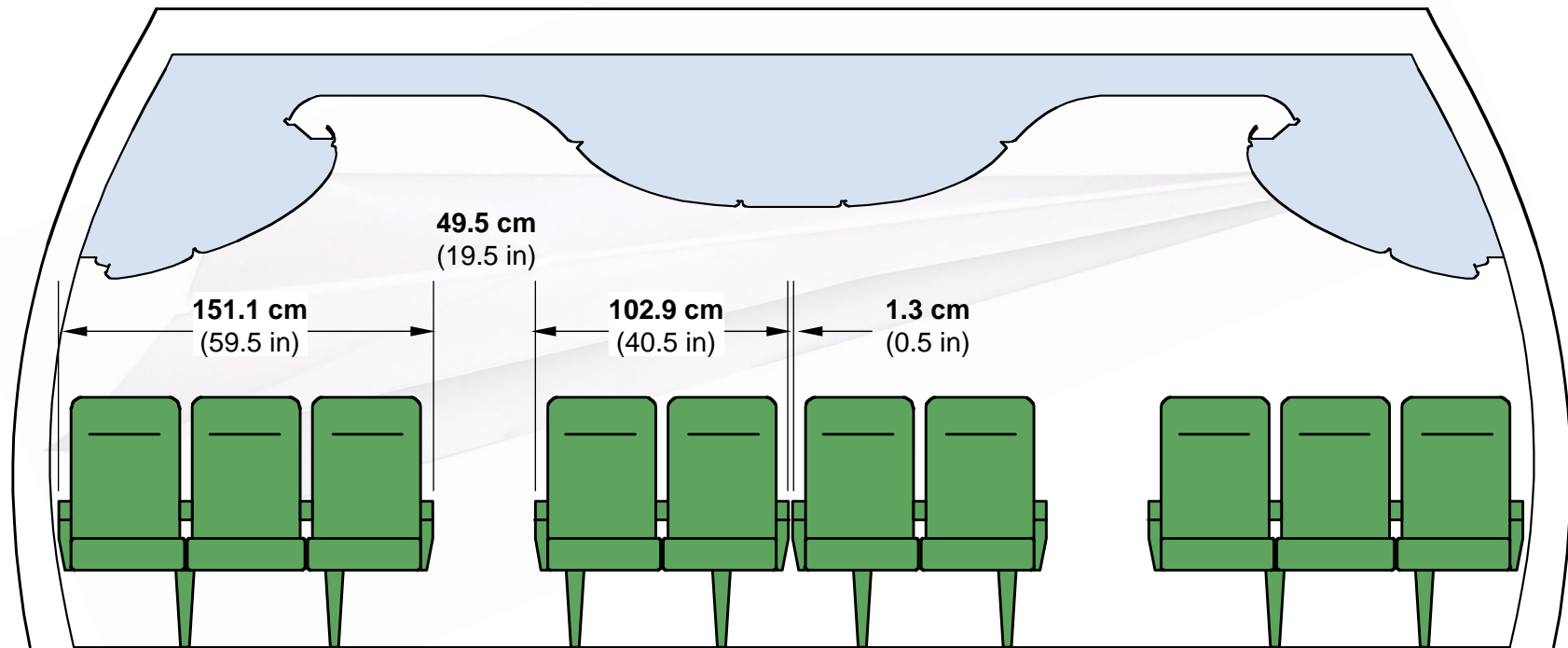
747-400/-400ER Business-class, upper deck

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747-400/-400ER Economy-class

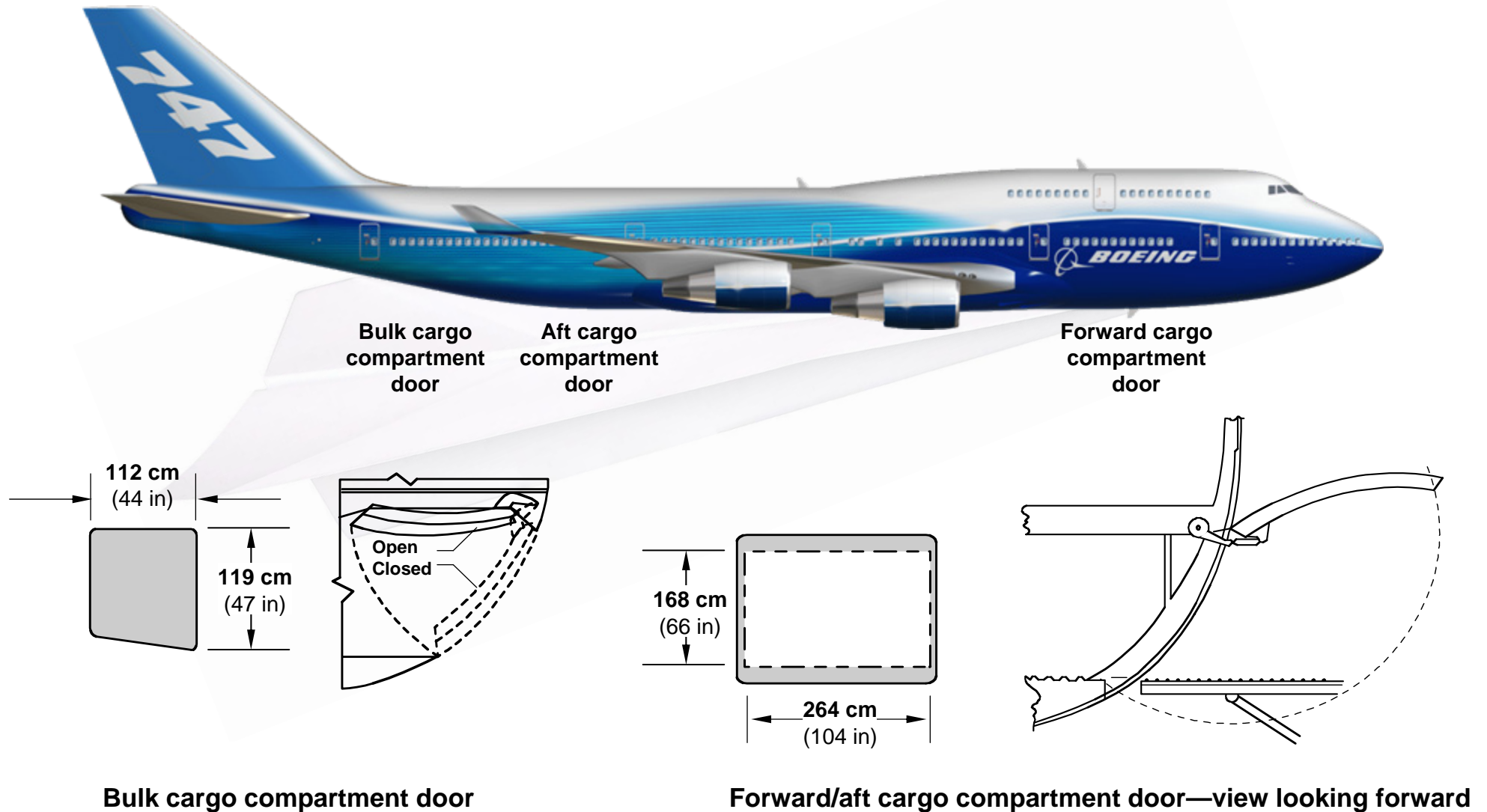
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10 abreast

747-400/-400ER Lower hold cargo door arrangement

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747-400 lower hold capability

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		Lower hold compartment			
		Forward	Aft	Bulk	Total
Basic					
All containers (16/14)	m ³ (ft ³)	79.3 (2,800)	69.4 (2,450)	23.6 (835)	172.3 (6,085)
Pallets/containers (5/14)	m ³ (ft ³)	58.8 (2,075)	69.4 (2,450)	23.6 (835)	151.8 (5,360)
All pallets (5/4)	m ³ (ft ³)	58.8 (2,075)	47.0 (1,660)	23.6 (835)	129.4 (4,570)
Optional aft lower hold					
Pallets/containers (5/16)	m ³ (ft ³)	58.8 (2,075)	79.3 (2,800)	13.9 (490)	151.9 (5,365)

- LD-1 containers.
- 96- x 125-in pallets.

747-400ER lower hold capability

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			Compartment			
			Forward	Aft	Bulk	Total
Basic (one auxiliary tank)						
All containers (14/14)	m ³ (ft ³)		69.4 (2,450)	69.4 (2,450)	21.4 (755)	160.1 (5,655)
Pallets/containers (4/14)	m ³ (ft ³)		47.0 (1,660)	69.4 (2,450)	21.4 (755)	137.8 (4,865)
All pallets (4/4)	m ³ (ft ³)		47.0 (1,660)	47.0 (1,660)	21.4 (755)	115.4 (4,075)
Optional fuel capacity (two auxiliary tanks)						
All containers (12/14)	m ³ (ft ³)		49.0 (1,730)	69.4 (2,450)	21.4 (755)	139.7 (4,935)
Pallets/containers (3/14)	m ³ (ft ³)		35.3 (1,245)	69.4 (2,450)	21.4 (755)	126.0 (4,450)
All pallets (3/4)	m ³ (ft ³)		35.3 (1,245)	47.0 (1,660)	21.4 (755)	103.6 (3,660)
Optional aft lower hold						
Pallets/containers (4/16)	m ³ (ft ³)		47.0 (1,660)	79.3 (2,800)	11.6 (410)	137.9 (4,870)

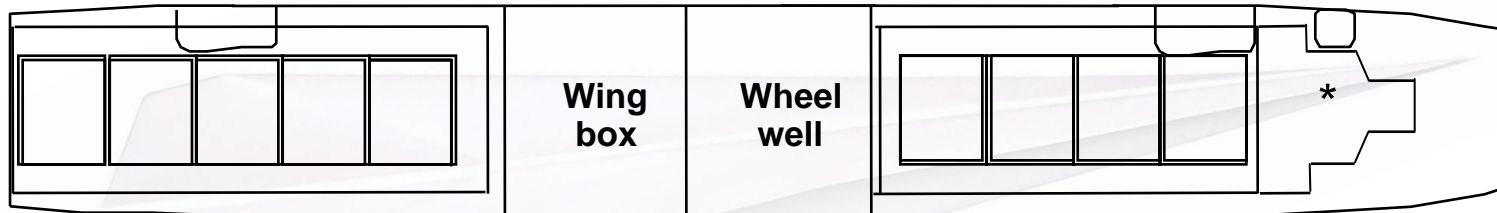
- LD-1 containers.
- 96- x 125-in pallets.

Lower hold cargo volume

747-400

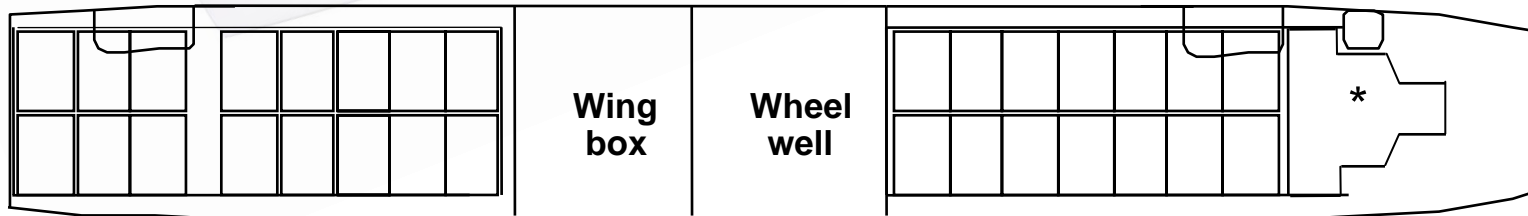
Forward lower hold

Aft lower hold



(5) 96-in x 125-in pallets
58.8 m³ (2,075 ft³)

(4) 96-in x 125-in pallets
47.0 m³ (1,660 ft³)



(16) LD-1/LD-3 containers
79.3 m³ (2,800 ft³)

(14) LD-1/LD-3 containers
69.4 m³ (2,450 ft³)

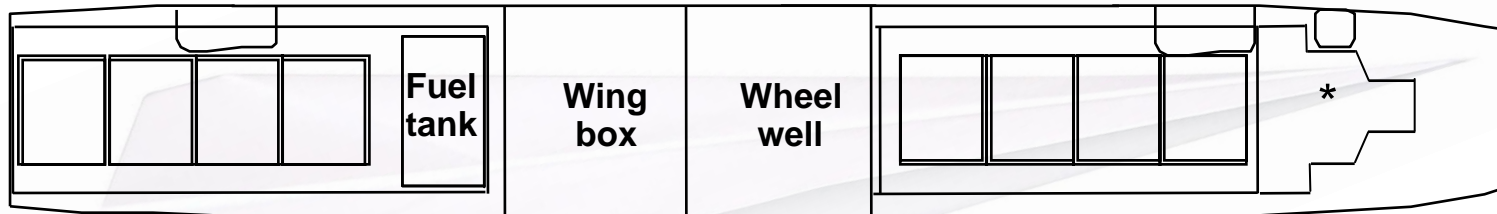
*Bulk cargo = 23.6 m³ (835 ft³) or 13.9 m³ (490 ft³) with 2 additional LD-1/LD-3 option.

Lower hold cargo volume

747-400ER

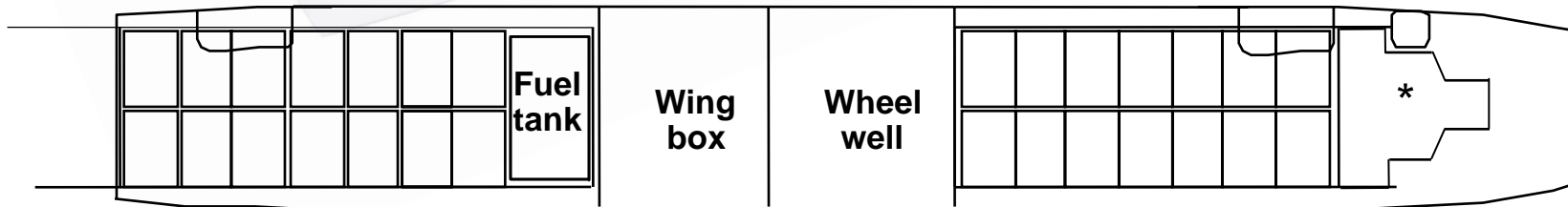
Forward lower hold

Aft lower hold



(4) 96-in x 125-in pallets
47.0 m³ (1,660 ft³)

(4) 96-in x 125-in pallets
47.0 m³ (1,660 ft³)



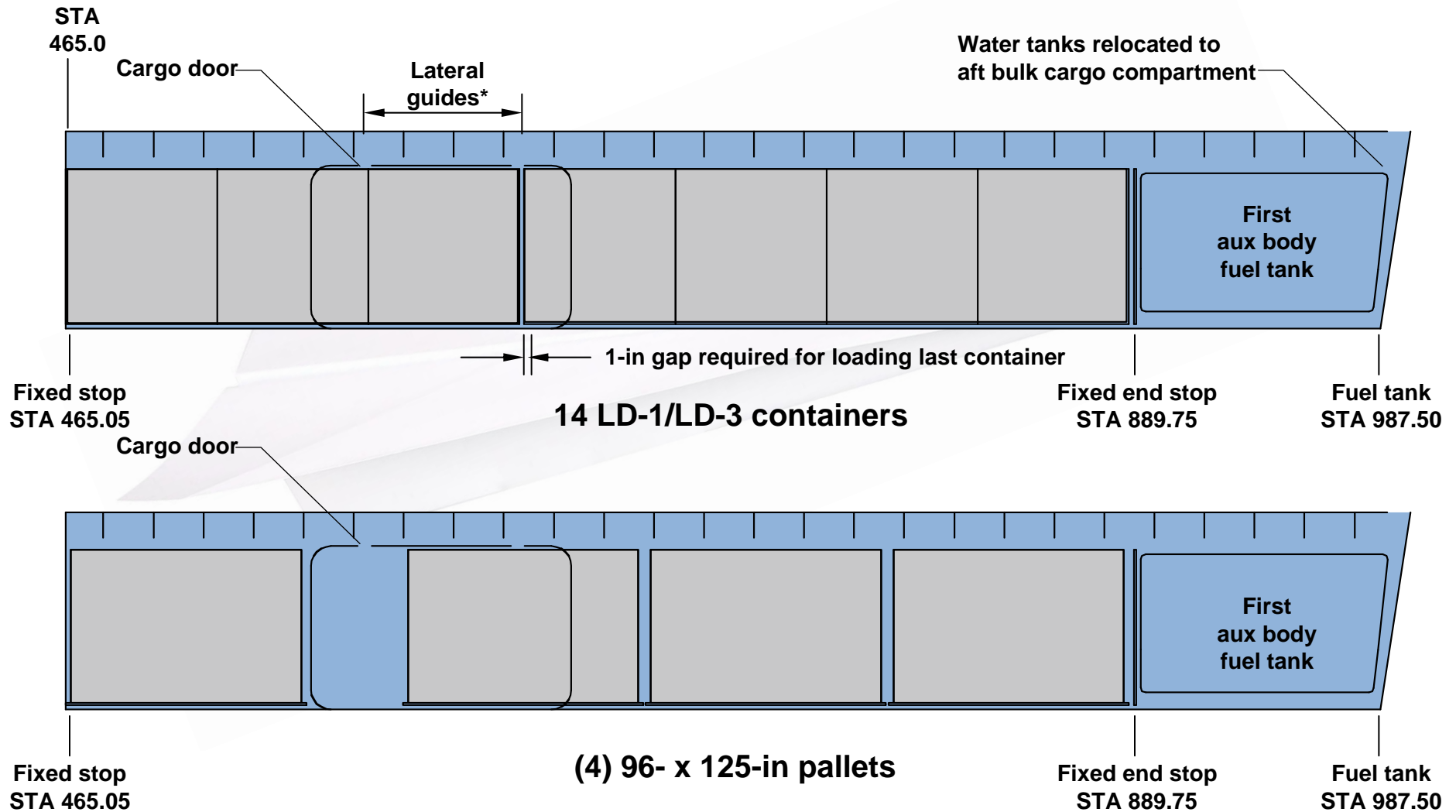
(14) LD-1/LD-3 containers
69.4 m³ (2,450 ft³)

(14) LD-1/LD-3 containers
69.4 m³ (2,450 ft³)

*Bulk cargo = 21.4 m³ (755 ft³) or 11.6 m³ (410 ft³) with 2 additional LD-1/LD-3 option.

747-400ER forward lower hold cargo arrangement with one body fuel tank

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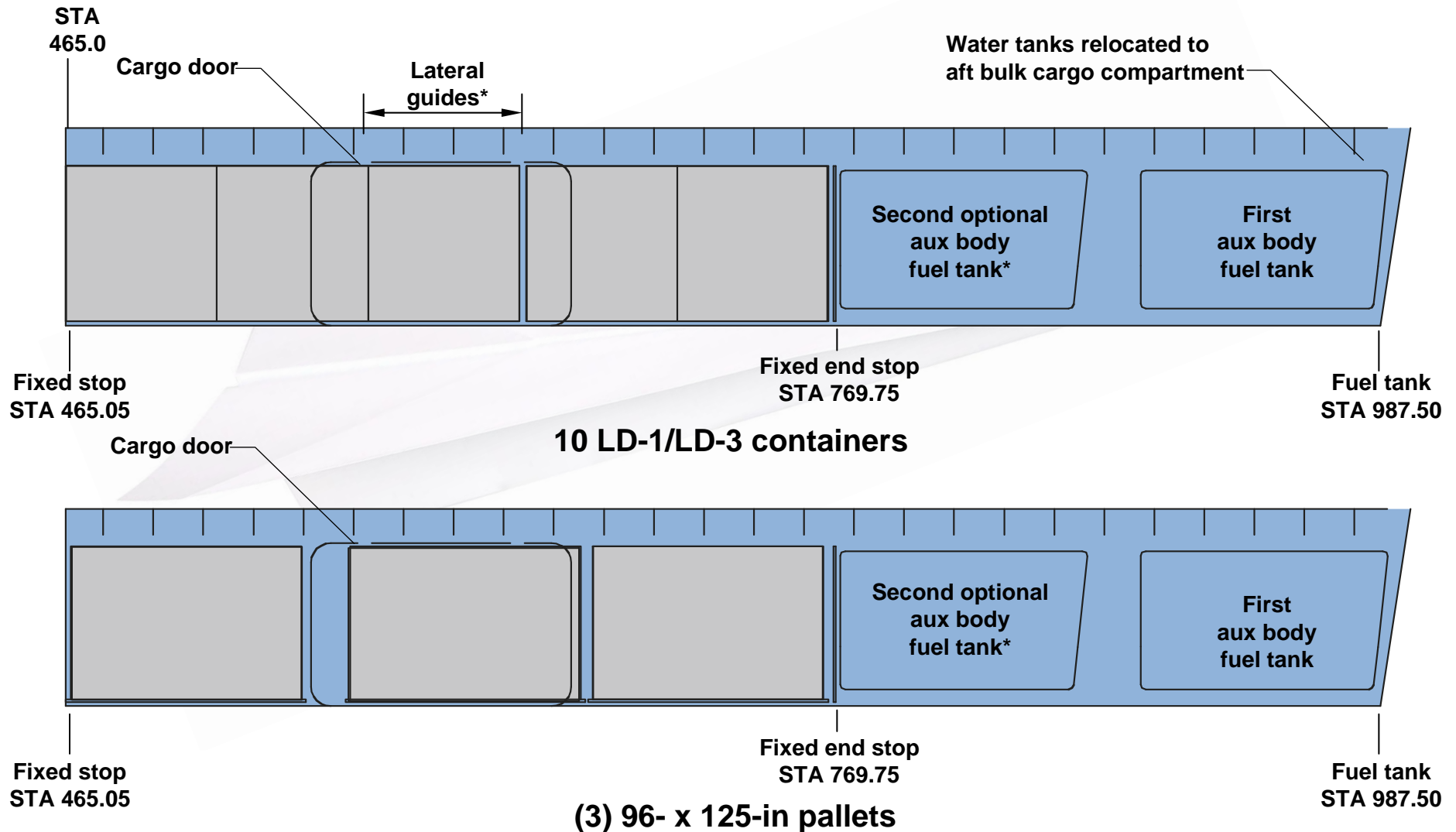
*Not typical loading for last container.

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May 2010

747-400ER forward lower hold cargo arrangement with two body fuel tanks

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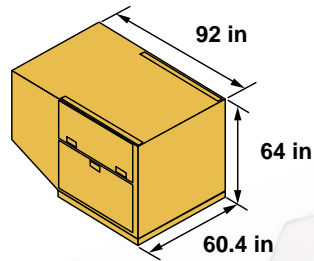


* Provisions basic.

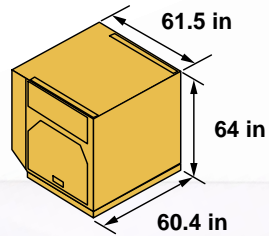
747-400/-400ER Lower hold capability

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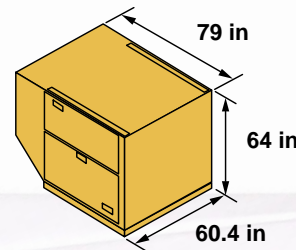
Containers and pallets



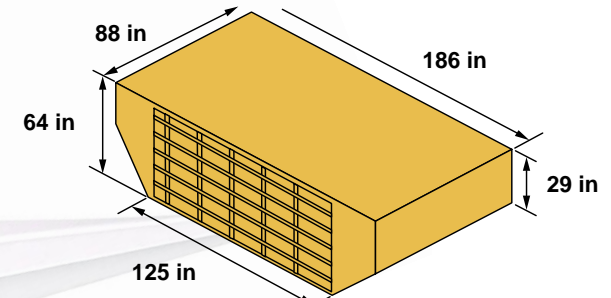
1,588-kg (3,500-lb)
4.9 m³ (175 ft³)
(LD-1)



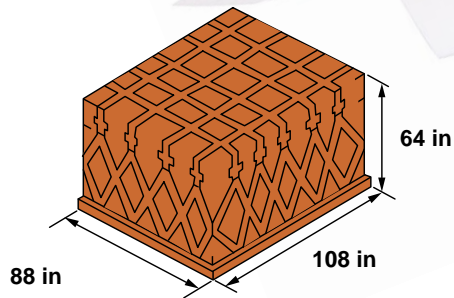
1,225-kg (2,700-lb)
3.5 m³ (125 ft³)
(LD-2)



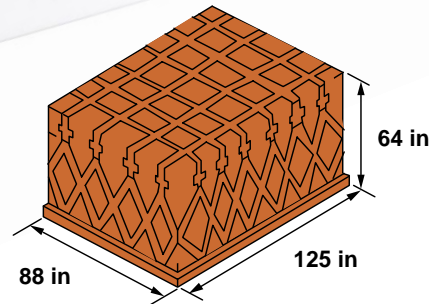
1,588-kg (3,500-lb)
4.5 m³ (160 ft³)
(LD-3)



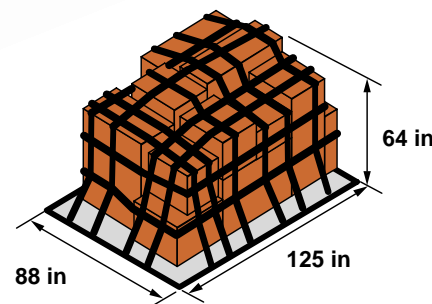
4,536-kg (10,000-lb)
14.6 m³ (516 ft³)
(LD-29)



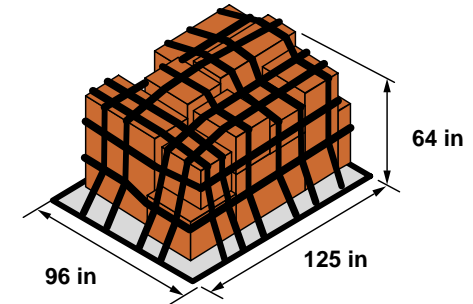
4,627-kg (10,200-lb)
9.0 m³ (320 ft³) (military)
9.2 m³ (327 ft³) (commercial)



4,627-kg (10,200-lb)
10.8 m³ (381 ft³)
(LD-7)



4,627-kg (10,200-lb)
10.5 m³ (372 ft³)
(pallet)



5,035-kg (11,100-lb)
11.7 m³ (415 ft³)
(pallet)

747-400 performance summary

StartupBoeing

General Electric engines

		Basic	Maximum ²
Passengers Cargo	(FC/BC/EC) pallets/containers ¹	416 (23/78/315) 5/14	
Engines		CF6-80C2B1F	CF6-80C2B5F
SL standard-day takeoff thrust/flat-rated temperature (BET)	lb/°F	56,500/90	62,100/86
Maximum taxi weight	kg (lb)	364,230 (803,000)	398,250 (878,000)
Maximum takeoff weight	kg (lb)	362,870 (800,000)	396,890 (875,000)
Maximum landing weight	kg (lb)	260,360 (574,000)	295,740 (652,000)
Maximum zero fuel weight	kg (lb)	242,670 (535,000)	251,740 (555,000)
Operating empty weight ³	kg (lb)	182,480 (402,300)	182,840 (403,100)
Fuel capacity	L (U.S. gal)	203,520 (53,765)	216,010 (57,065)
Design range (MTOW, full passenger payload)	nmi (km)	6,080 (11,260)	7,225 ⁴ (13,380) ⁴
Cruise Mach		0.855	0.855
Takeoff field length (SL, 86°F, MTOW)	m (ft)	2,815 (9,250)	3,015 (9,900)
Initial cruise altitude (MTOW, ISA + 10°C)	ft	34,700	32,700
Landing field length (MLW)	m (ft)	1,905 (6,250)	2,175 (7,150)
Approach speed (MLW)	kias	146	157
Fuel burn/seat 6,000 nmi	kg (lb)	298.2 (657.4)	298.6 (658.4)

- Typical mission rules.
 - Three-class seating.
- ¹196- x 125-in pallets/LD-1 containers.
²Highest optional weight, loading restrictions apply.
³Includes overhead crew rest, door 5—does not include IFE.
⁴Fuel volume limited.

747-400 performance summary

StartupBoeing

Pratt & Whitney engines

		Basic	Maximum ²
Passengers Cargo	(FC/BC/EC) pallets/containers ¹	416 (23/78/315) 5/14	
Engines		PW4056	PW4062
SL standard-day takeoff thrust/flat-rated temperature (BET)	lb/°F	57,100/92	63,300/86
Maximum taxi weight	kg (lb)	364,230 (803,000)	398,250 (878,000)
Maximum takeoff weight	kg (lb)	362,870 (800,000)	396,890 (875,000)
Maximum landing weight	kg (lb)	260,360 (574,000)	295,740 (652,000)
Maximum zero fuel weight	kg (lb)	242,670 (535,000)	251,740 (555,000)
Operating empty weight ³	kg (lb)	183,160 (403,800)	183,520 (404,600)
Fuel capacity	L (U.S. gal)	204,350 (53,985)	216,840 (57,285)
Design range (MTOW, full passenger payload)	nmi (km)	6,075 (11,250)	7,285 ⁴ (13,490) ⁴
Cruise Mach		0.855	0.855
Takeoff field length (SL, 86°F, MTOW)	m (ft)	2,815 (9,250)	2,955 (9,700)
Initial cruise altitude (MTOW, ISA + 10°C)	ft	34,700	32,800
Landing field length (MLW)	m (ft)	1,905 (6,250)	2,175 (7,150)
Approach speed (MLW)	kias	146	157
Fuel burn/seat 6,000 nmi	kg (lb)	296.7 (654.1)	297.1 (655.1)

- Typical mission rules.
- Three-class seating.

¹96- x 125-in pallets/LD-1 containers.

²Highest optional weight, loading restrictions apply.

³Includes overhead crew rest, door 5—does not include IFE.

⁴Fuel volume limited.

747-400 performance summary

StartupBoeing

Rolls-Royce engines

		Basic	Maximum ²
Passengers Cargo	(FC/BC/EC) pallets/containers ¹	416 (23/78/315) 5/14	
Engines SL standard-day takeoff thrust/flat-rated temperature (BET)	lb/°F	RB211-524G2-T 56,400/86	RB211-524H2-T 59,500/86
Maximum taxi weight	kg (lb)	364,230 (803,000)	398,250 (878,000)
Maximum takeoff weight	kg (lb)	362,870 (800,000)	396,890 (875,000)
Maximum landing weight	kg (lb)	260,360 (574,000)	295,740 (652,000)
Maximum zero fuel weight	kg (lb)	242,670 (535,000)	251,740 (555,000)
Operating empty weight ³	kg (lb)	183,290 (404,100)	183,650 (404,900)
Fuel capacity	L (U.S. gal)	204,350 (53,985)	216,840 (57,285)
Design range (MTOW, full passenger payload)	nmi (km)	5,960 (11,030)	7,155 ⁴ (13,250)⁴
Cruise Mach		0.855	0.855
Takeoff field length (SL, 86°F, MTOW)	m (ft)	2,830 (9,300)	3,200 (10,500)
Initial cruise altitude (MTOW, ISA + 10°C)	ft	34,700	32,800
Landing field length (MLW)	m (ft)	1,905 (6,250)	2,175 (7,150)
Approach speed (MLW)	kias	146	157
Fuel burn/seat 6,000 nmi	kg (lb)	Not applicable	303.0 (667.9)

- Typical mission rules.
- Three-class seating.

¹96- x 125-in pallets/LD-1 containers.

²Highest optional weight, loading restrictions apply.

³Includes overhead crew rest, door 5—does not include IFE.

⁴Fuel volume limited.

747-400ER performance summary

StartupBoeing

General Electric engines

		Basic fuel capacity ² (1 body tank)	Maximum fuel capacity ² (2 body tanks)
Passengers	(FC/BC/EC)	416 (23/78/315)	
Cargo	pallets/containers ¹	4/14	3/14
Engines		CF6-80C2B5F	CF6-80C2B5F
SL standard-day takeoff thrust/flat-rated temperature (BET)	lb/°F	62,100/86	62,100/86
Maximum taxi weight	kg (lb)	414,130 (913,000)	414,130 (913,000)
Maximum takeoff weight	kg (lb)	412,760 (910,000)	412,760 (910,000)
Maximum landing weight	kg (lb)	263,530 (581,000)	295,740 (652,000)
Maximum zero fuel weight	kg (lb)	245,840 (542,000)	251,740 (555,000)
Operating empty weight ³	kg (lb)	185,610 (409,200)	186,330 (410,800)
Fuel capacity	L (U.S. gal)	228,160 (60,275)	240,310 (63,485)
Design range (MTOW, full passenger payload)	nmi (km)	7,495 ⁴ (13,880) ⁴	7,565 (14,010)
Cruise Mach		0.855	0.855
Takeoff field length (SL, 86°F, MTOW)	m (ft)	3,320 (10,900)	3,320 (10,900)
Initial cruise altitude (MTOW, ISA + 10°C)	ft	31,900	32,800
Landing field length (MLW)	m (ft)	1,935 (6,350)	2,175 (7,150)
Approach speed (MLW)	kias	147	157
Fuel burn/seat 6,000 nmi	kg (lb)	304.5 (671.4)	305.4 (673.4)

- Typical mission rules.
- Three-class seating.

¹96- x 125-in pallets/LD-1 containers.

²Highest weight, loading restrictions apply.

³Includes overhead crew rest, door 5—does not include IFE.

⁴Fuel volume limited.

747-400ER performance summary

StartupBoeing

Pratt & Whitney engines

		Basic fuel capacity ² (1 body tank)	Maximum fuel capacity ² (2 body tanks)
Passengers	(FC/BC/EC)	416 (23/78/315)	
Cargo	pallets/containers ¹	4/14	3/14
Engines		PW4062	PW4062
SL standard-day takeoff thrust/flat-rated temperature (BET)	lb/°F	63,300/86	63,300/86
Maximum taxi weight	kg (lb)	414,130 (913,000)	414,130 (913,000)
Maximum takeoff weight	kg (lb)	412,760 (910,000)	412,760 (910,000)
Maximum landing weight	kg (lb)	263,530 (581,000)	295,740 (652,000)
Maximum zero fuel weight	kg (lb)	245,840 (542,000)	251,740 (555,000)
Operating empty weight ³	kg (lb)	186,290 (410,700)	187,010 (412,300)
Fuel capacity	L (U.S. gal)	228,990 (60,495)	241,140 (63,705)
Design range (MTOW, full passenger payload)	nmi (km)	7,560 ⁴ (14,000) ⁴	7,585 (14,045)
Cruise Mach		0.855	0.855
Takeoff field length (SL, 86°F, MTOW)	m (ft)	3,260 (10,700)	3,260 (10,700)
Initial cruise altitude (MTOW, ISA + 10°C)	ft	32,000	32,000
Landing field length (MLW)	m (ft)	1,935 (6,350)	2,175 (7,150)
Approach speed (MLW)	kias	147	157
Fuel burn/seat 6,000 nmi	kg (lb)	303.0 (668.0)	303.9 (669.9)

- Typical mission rules.
- Three-class seating.

¹196- x 125-in pallets/LD-1 containers.

²Highest weight, loading restrictions apply.

³Includes overhead crew rest, door 5—does not include IFE.

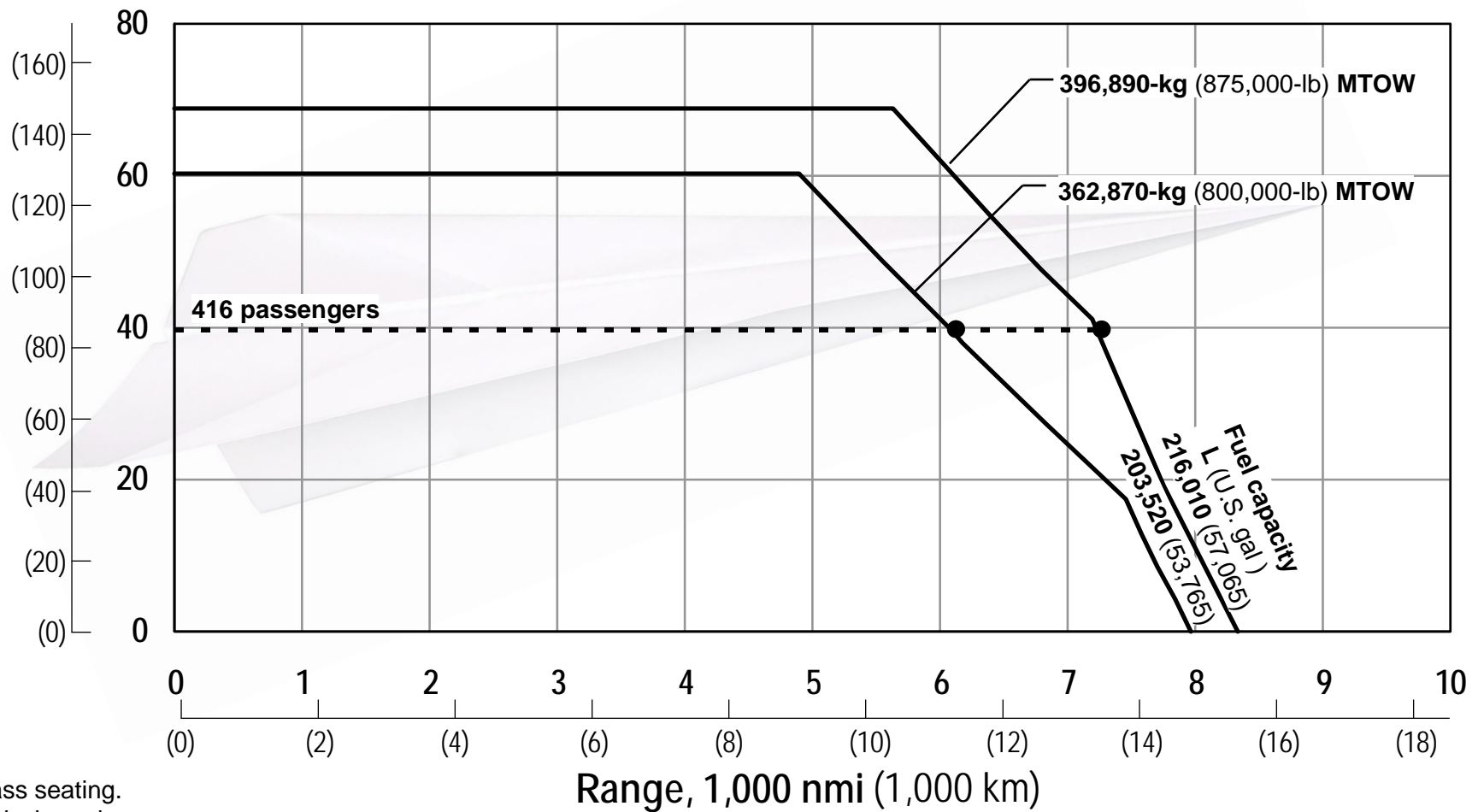
⁴Fuel volume limited.

747-400 payload-range capability

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Payload, 1,000 kg (1,000 lb)

General Electric engines



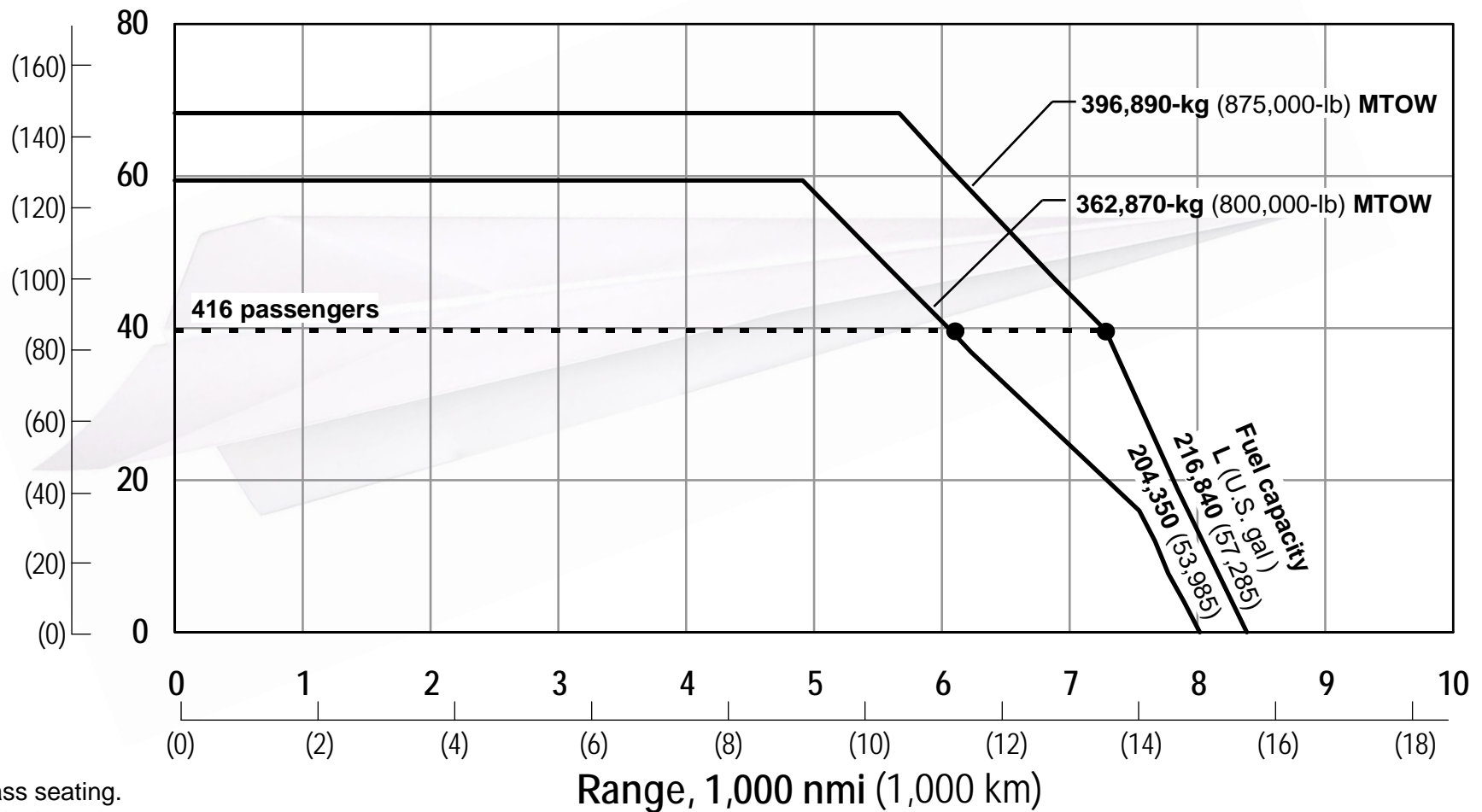
- Three-class seating.
- Typical mission rules.

747-400 payload-range capability

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Payload, 1,000 kg (1,000 lb)

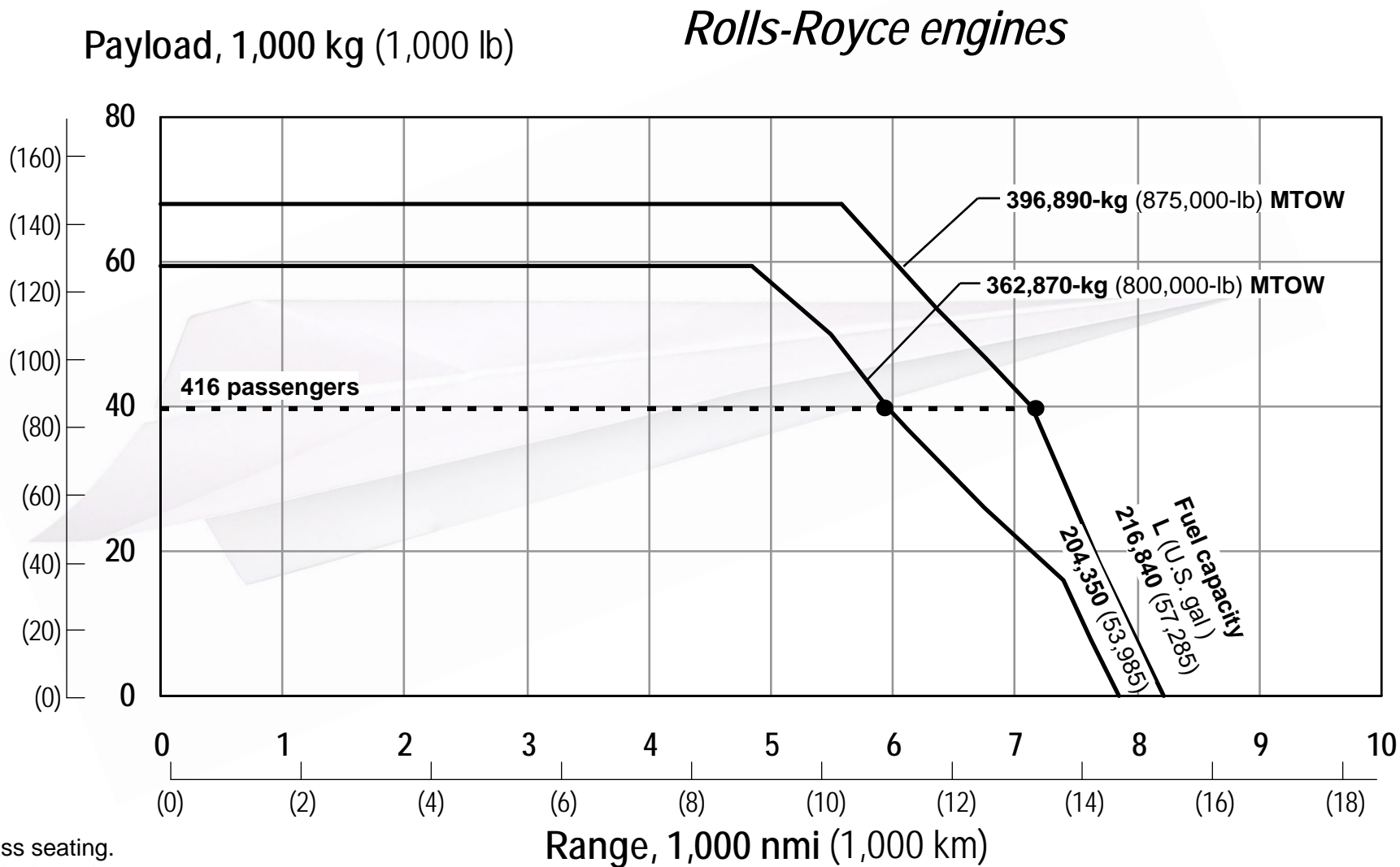
Pratt & Whitney engines



- Three-class seating.
- Typical mission rules.

747-400 payload-range capability

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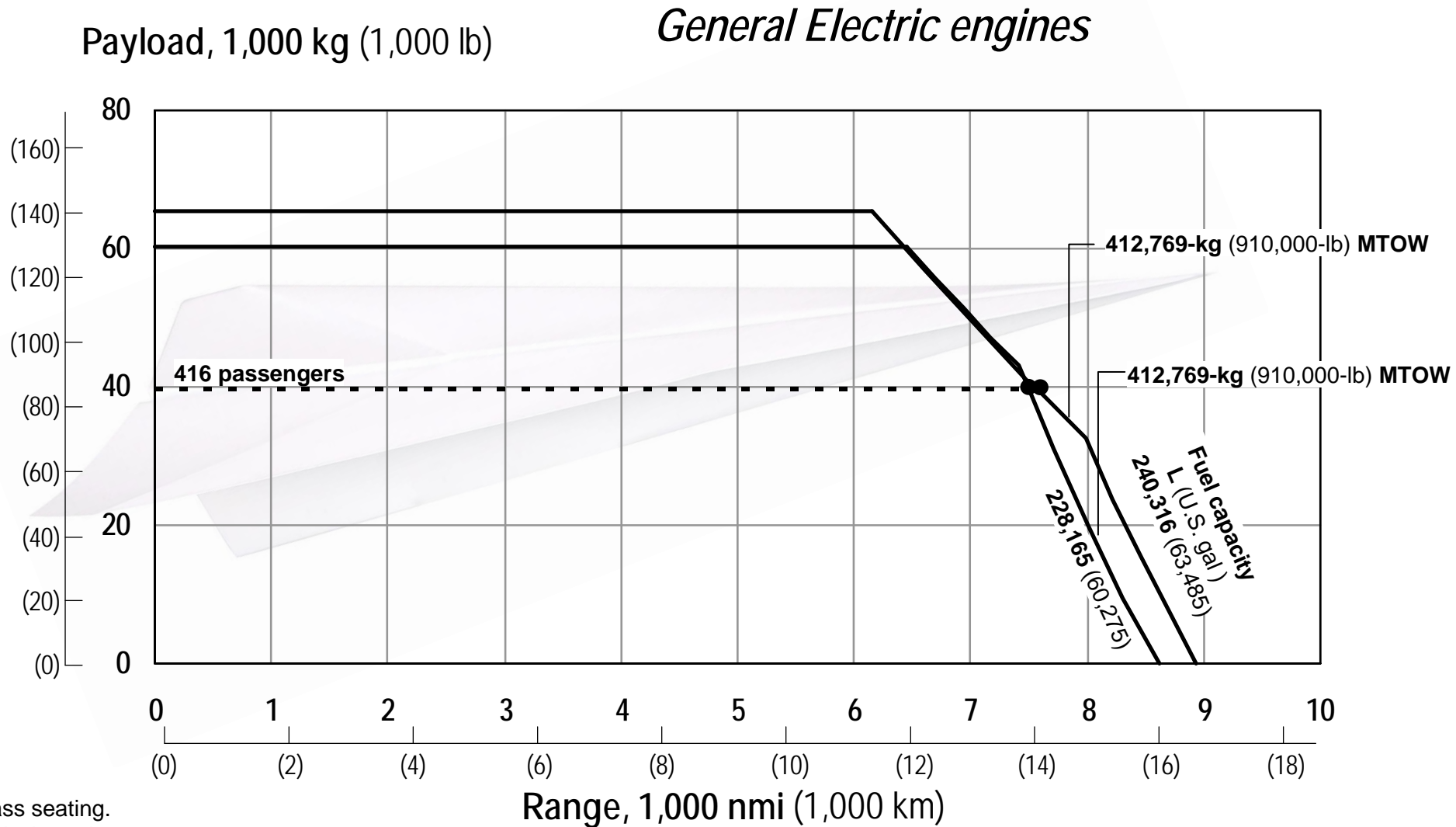


- Three-class seating.
- Typical mission rules.

747-400ER payload-range capability



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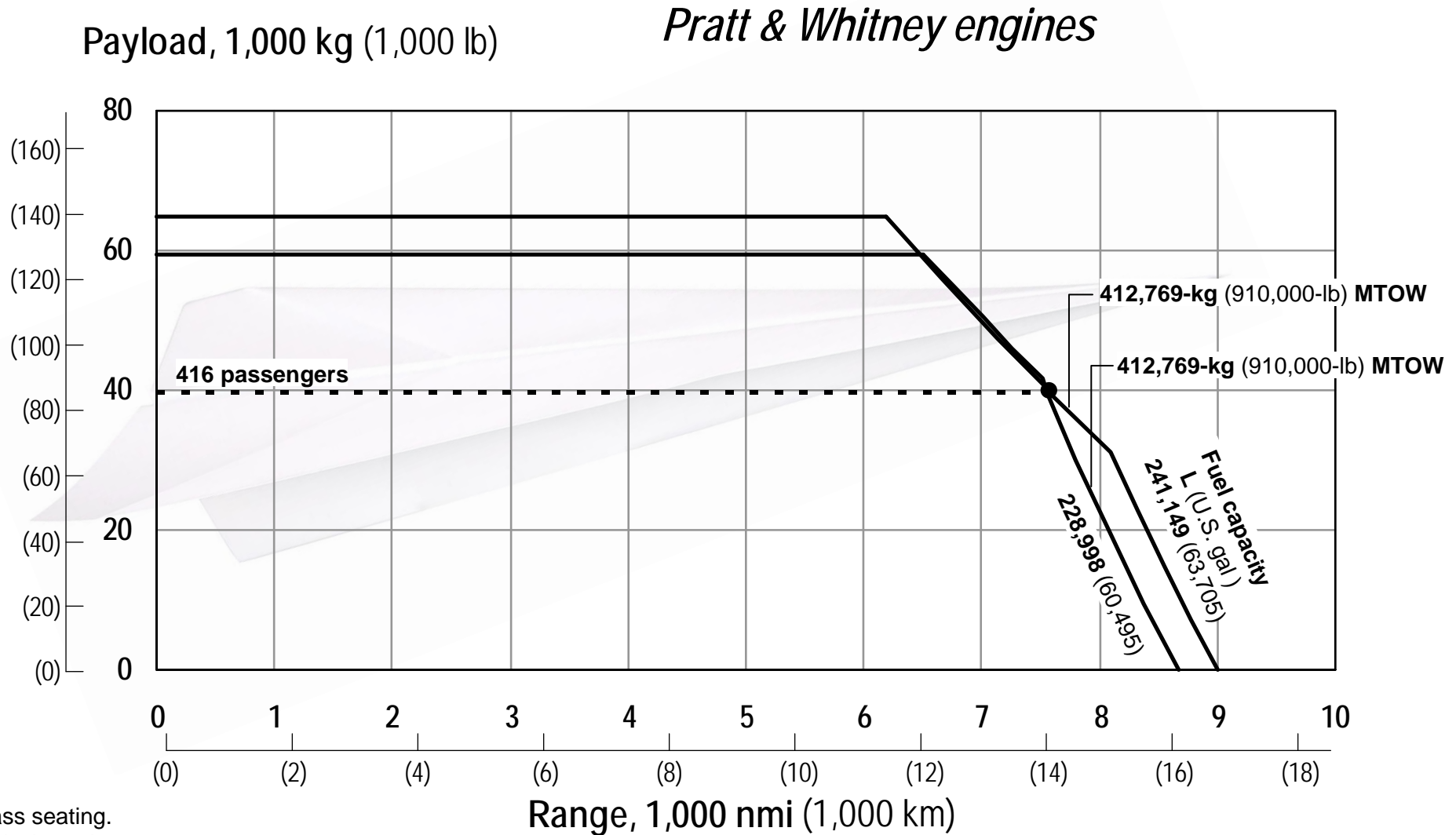


- Three-class seating.
- Typical mission rules.

747-400ER payload-range capability



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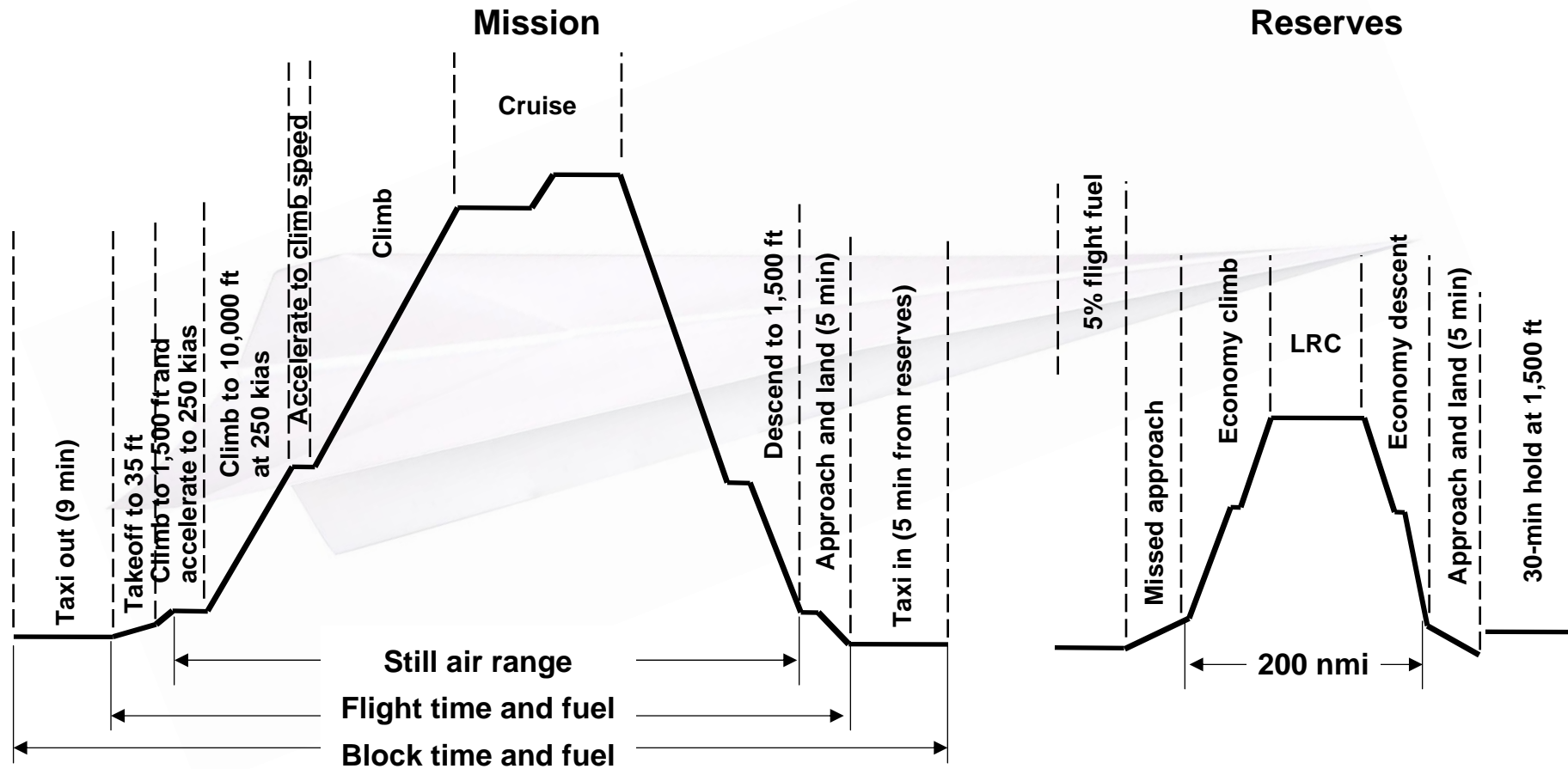


- Three-class seating.
- Typical mission rules.

Mission profile

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Typical mission rules



- Standard day.
- Fuel density, 6.7 lb/U.S. gal.
- Nominal performance.
- Passengers at 95 kg (210 lb) (passenger + baggage).

Connecting more cities around the world

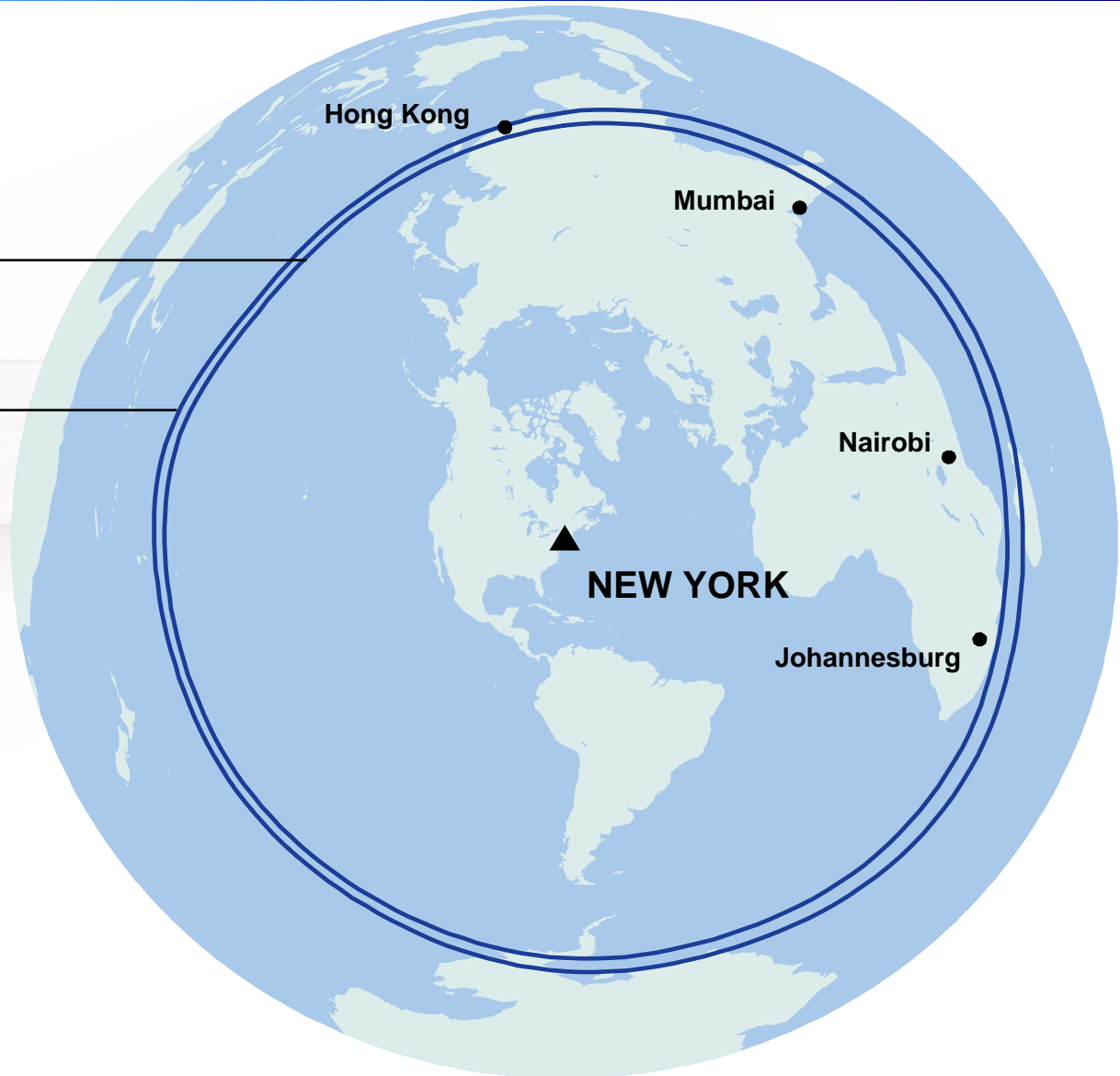
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Full passenger payload

747-400
396,890-kg (875,000-lb) MTOW
416 three-class passengers

747-400ER
412,770-kg (910,000-lb) MTOW
416 three-class passengers

- Typical mission rules.
- 85% annual winds.
- Airways and traffic allowances included.
- Range capability from New York.



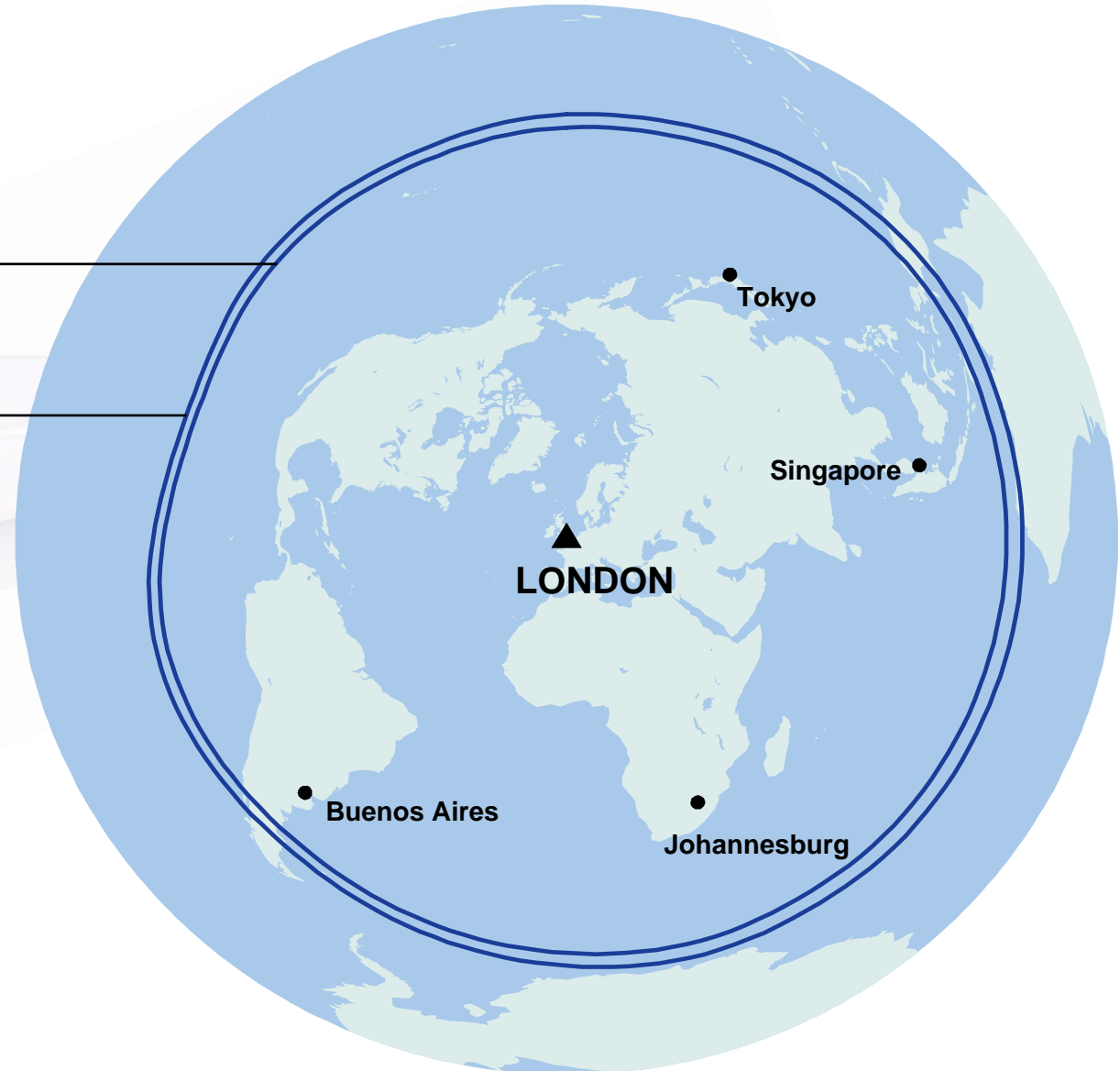
Connecting more cities around the world

StartupBoeing

Full passenger payload

747-400
396,890-kg (875,000-lb) MTOW
416 three-class passengers

747-400ER
412,770-kg (910,000-lb) MTOW
416 three-class passengers



- Typical mission rules.
- 85% annual winds.
- Airways and traffic allowances included.
- Range capability from London.

Connecting more cities around the world

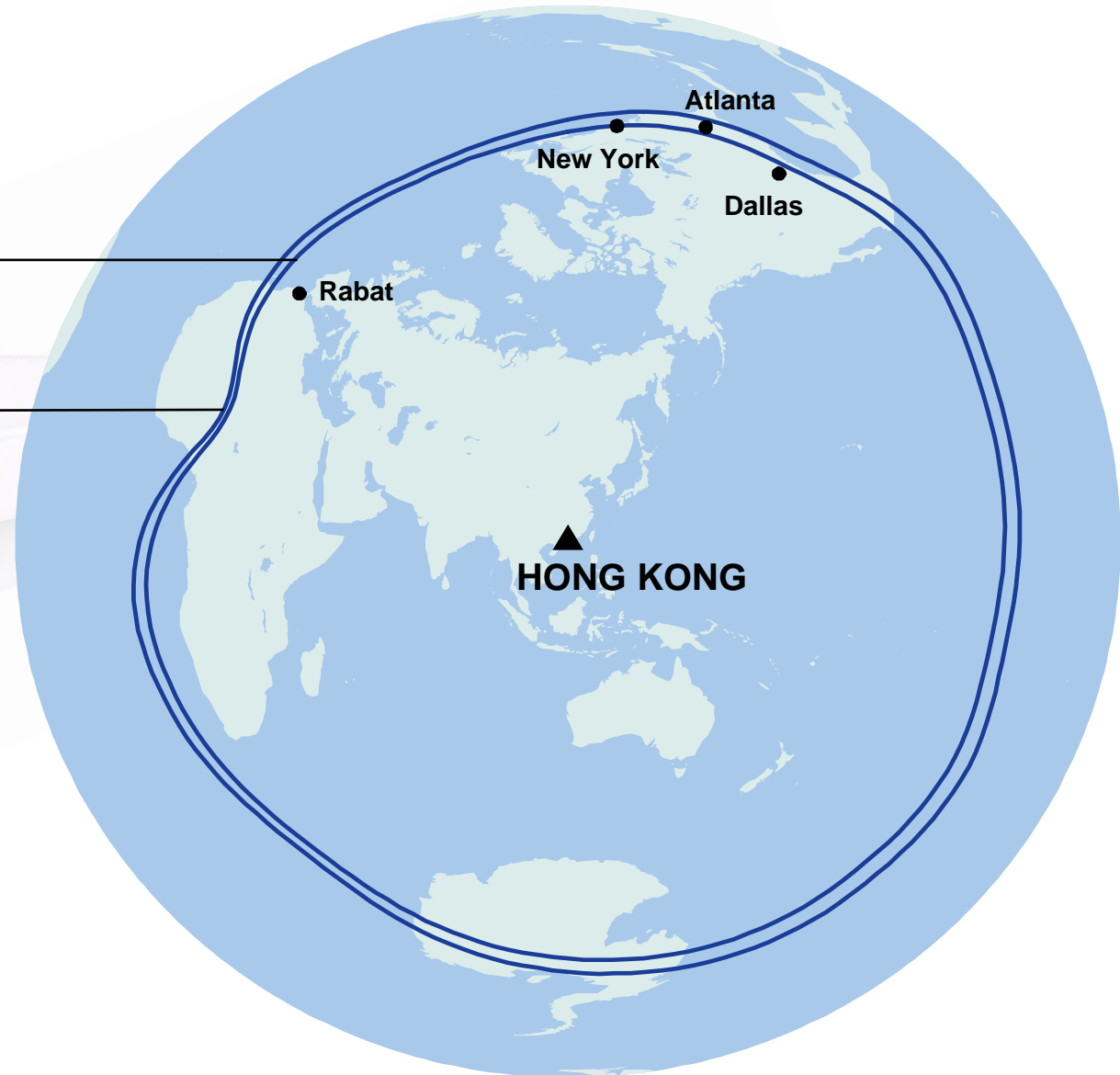
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Full passenger payload

747-400
396,890-kg (875,000-lb) MTOW
416 three-class passengers

747-400ER
412,770-kg (910,000-lb) MTOW
416 three-class passengers

- Typical mission rules.
- 85% annual winds.
- Airways and traffic allowances included.
- Range capability from Hong Kong.



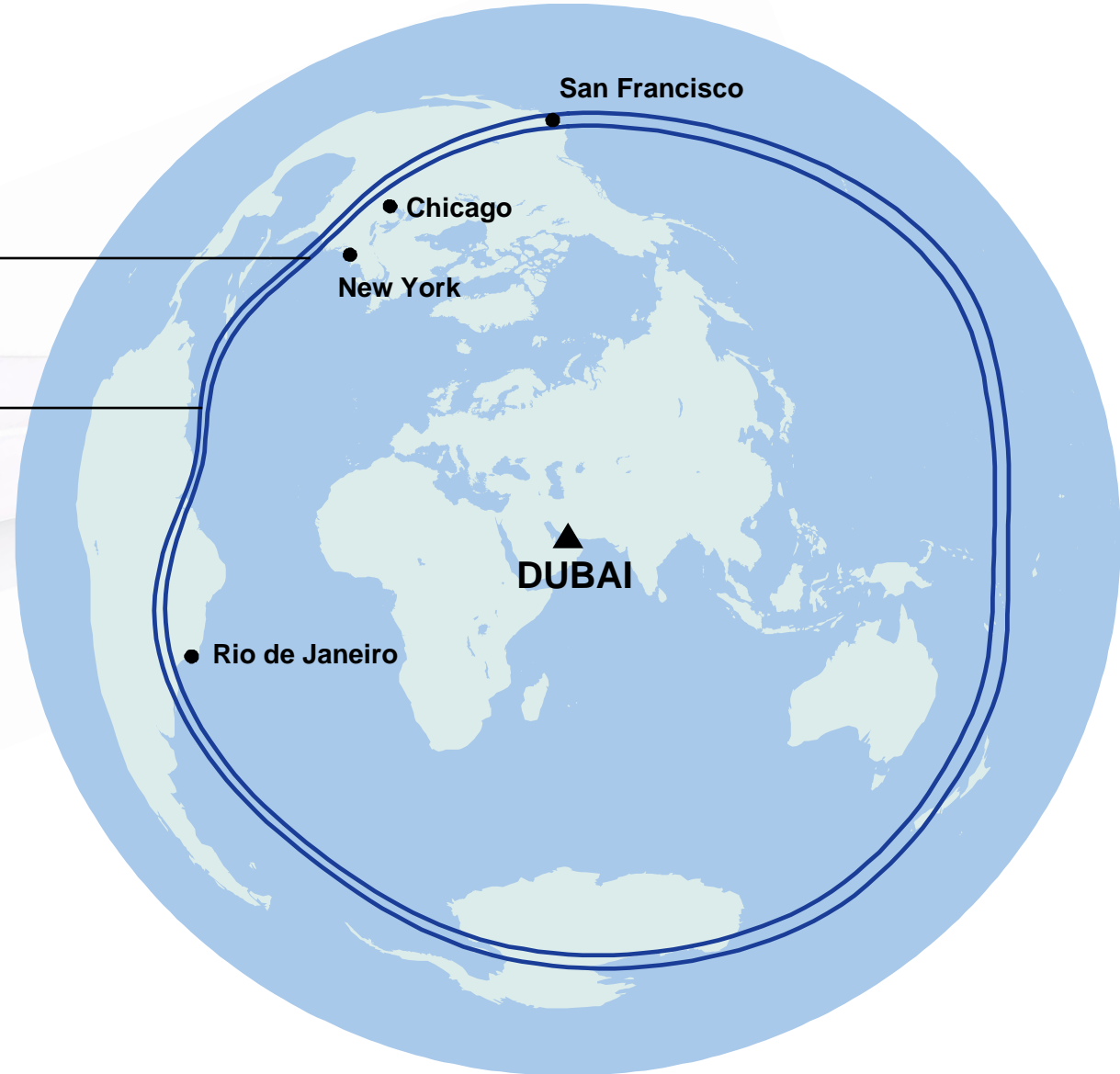
Connecting more cities around the world

StartupBoeing

Full passenger payload

747-400
396,890-kg (875,000-lb) MTOW
416 three-class passengers

747-400ER
412,770-kg (910,000-lb) MTOW
416 three-class passengers



- Typical mission rules.
- 85% annual winds.
- Airways and traffic allowances included.
- Range capability from Dubai.

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