

# MD-11 Boeing Converted Freighter

COMMERCIAL  
AVIATION  
SERVICES

The preferred package freighter



# MD-11 BCF conversion overview

Install Main Deck Pallet-Handling and  
Smoke-Detector Systems

Replace Passenger Interior and  
Systems with Freighter Interior

Install Main Deck  
Cargo Door

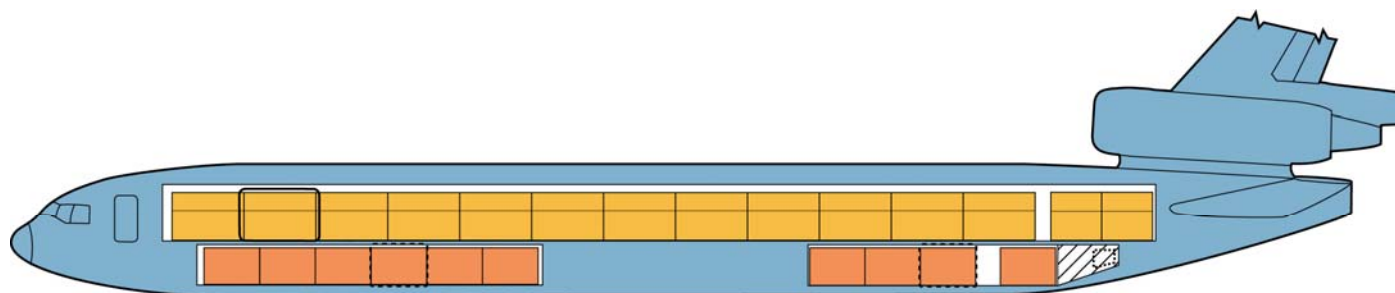


Install Cargo Barrier  
Net and Fittings

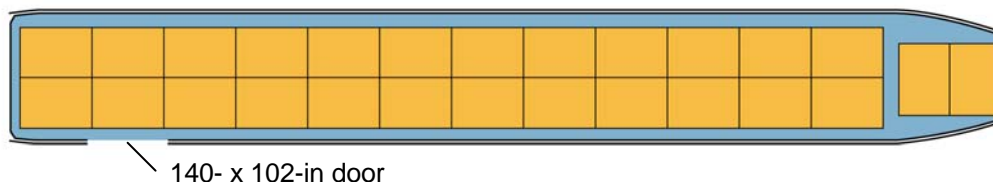
Modify Air-Conditioning  
System for Freighter

Modify Main Deck Floor as Required

# MD-11BCF cargo arrangements



## Main Deck

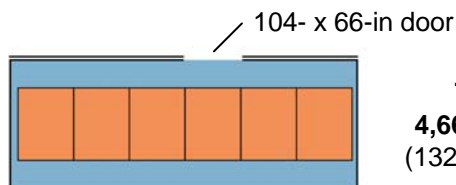


### Main deck ULD loading configuration

Qty	ULD type	Volume
26	88- x 125-in pallets 3 load profiles	<b>14,560 cu. ft.</b> (412.3 cu. m.)
26	96- x 125-in pallets 5 load profiles	<b>15,718 cu. ft.</b> (445.1 cu. m.)

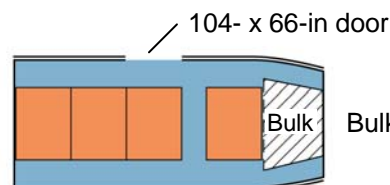
## Lower Hold

(6) 96- x 125-in @ 415 = 2,490 cu. ft.



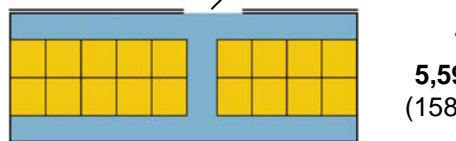
**Total**  
**4,660 cu. ft.**  
(132.0 cu. m.)

(4) 96- x 125-in @ 415 = 1,660 cu. ft.



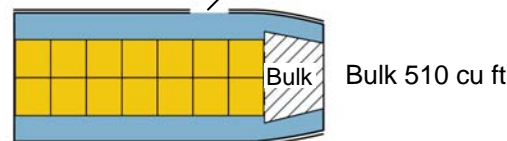
Bulk 510 cu. ft.

(18) LD-3 @ 159 = 2,862 cu. ft.



**Total**  
**5,598 cu. ft.**  
(158.5 cu. m.)

(14) LD-3 @ 159 = 2,226 cu. ft.




Bulk 510 cu ft

# MD-11BCF main deck cargo flexibility

## *Large pallet capability*





 (3) 96- x 238.5-in pallets

 (20) 88- or 96- x 125-in pallets

Capacity with 96- x 125-in pallets (5 load profiles)



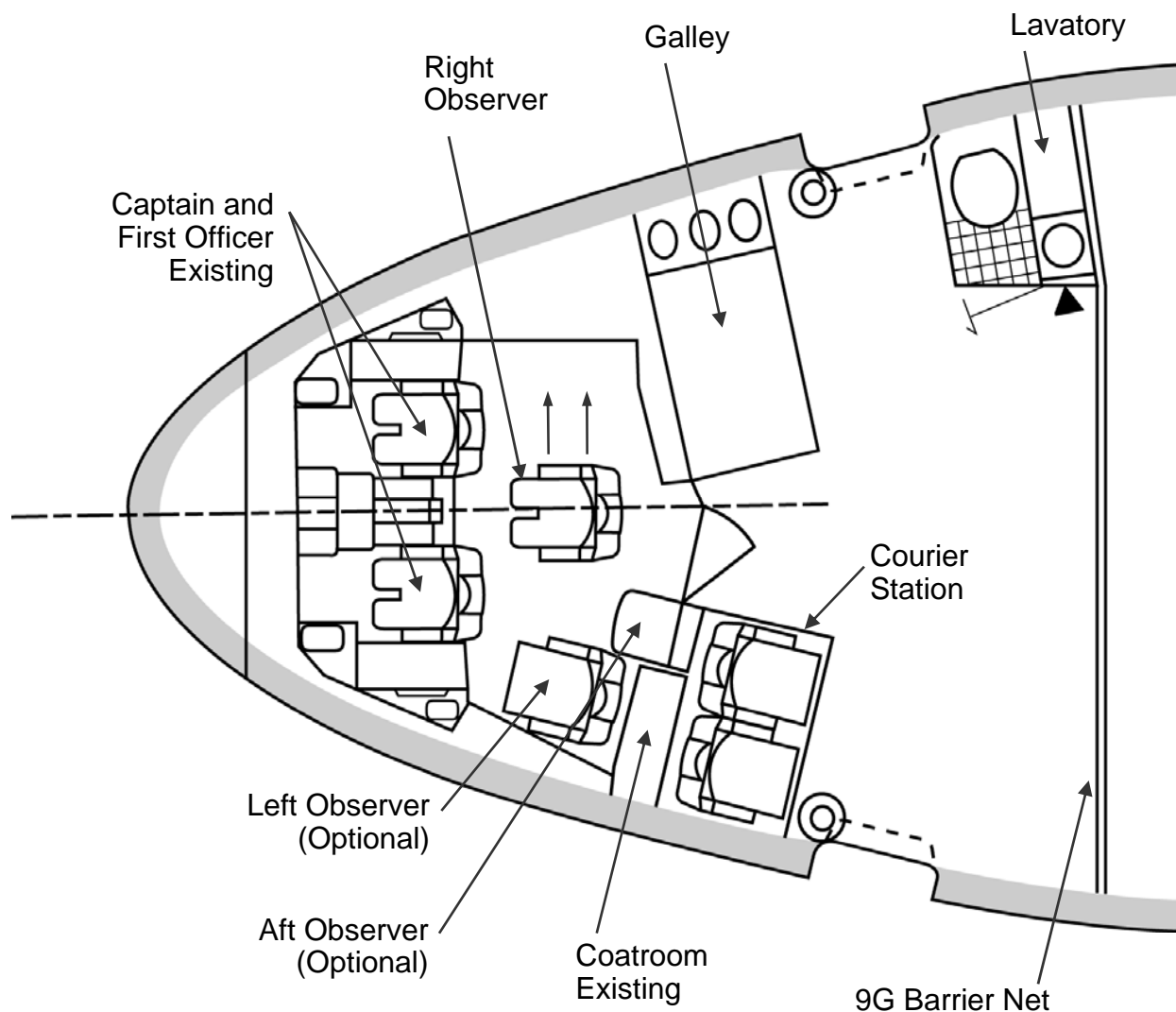
 (4) 96- x 196-in pallets

 (19) 88- or 96- x 125-in pallets

Capacity with 96- x 125-in pallets (5 load profiles)

# MD-11BCF crew area

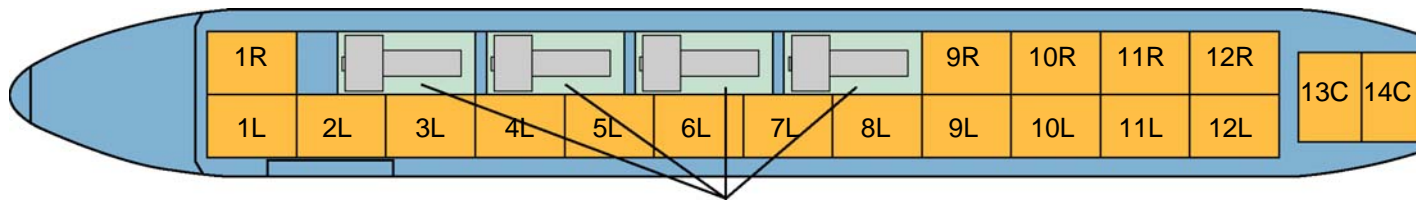
## *Standard front end configuration*



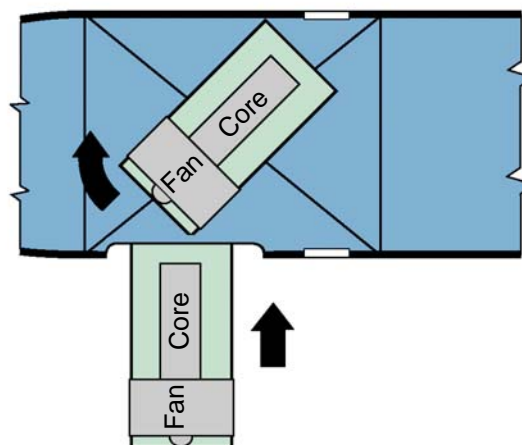
# MD-11BCF Main deck engine transport



# MD-11BCF Main deck engine transport



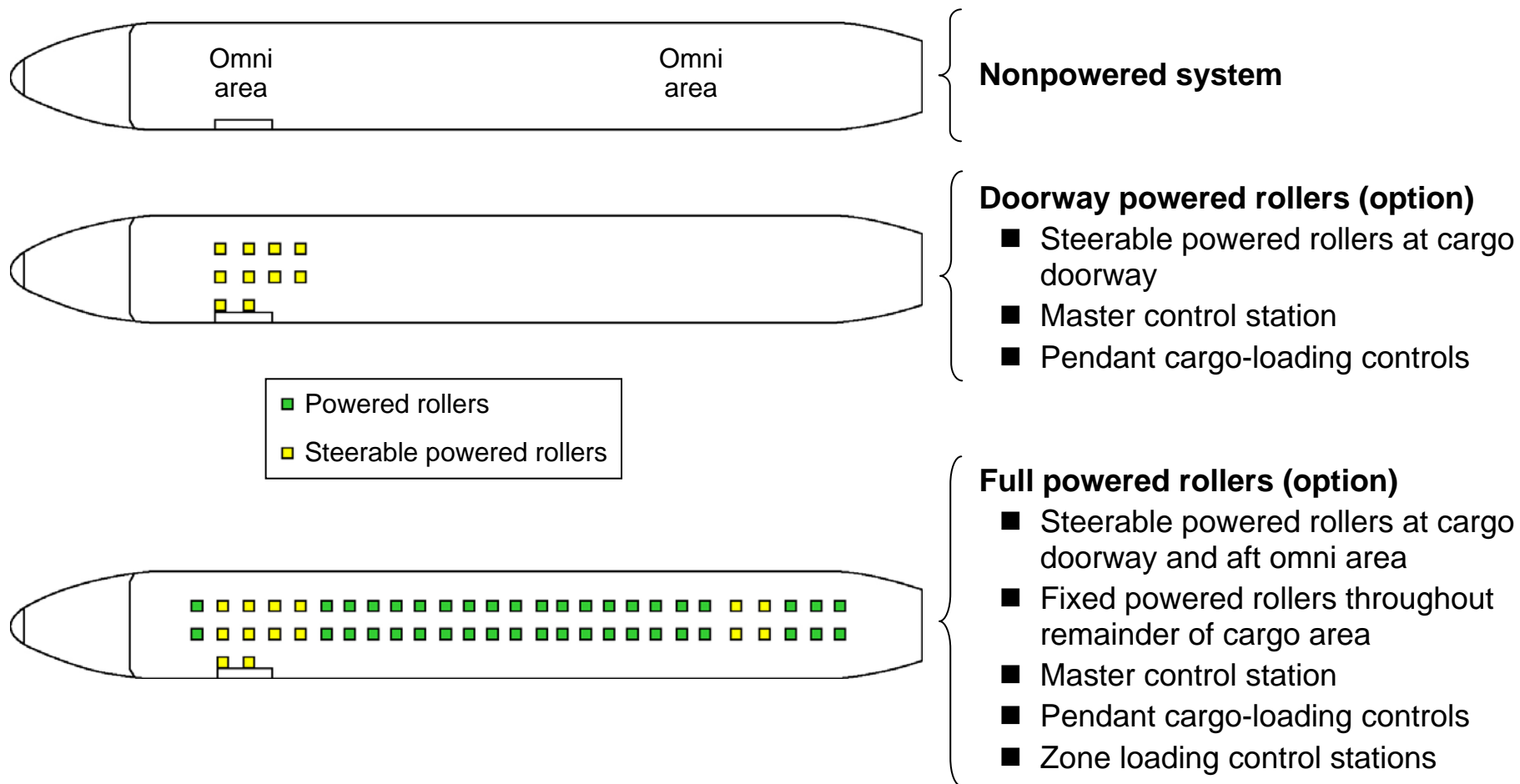
Loadable locations for engine transport device with MD-11, 767, or 747 engines



Loading techniques

# MD-11BCF Main deck cargo management

*MD-11F and MD-11BCF*

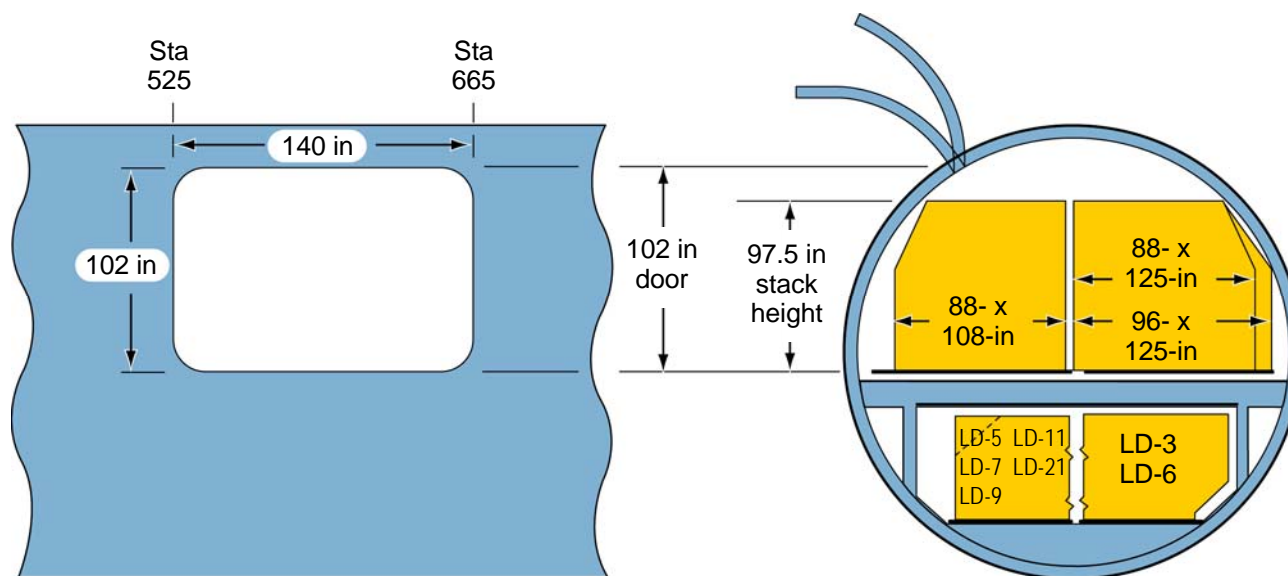




# MD-11F and MD-11BCF main deck



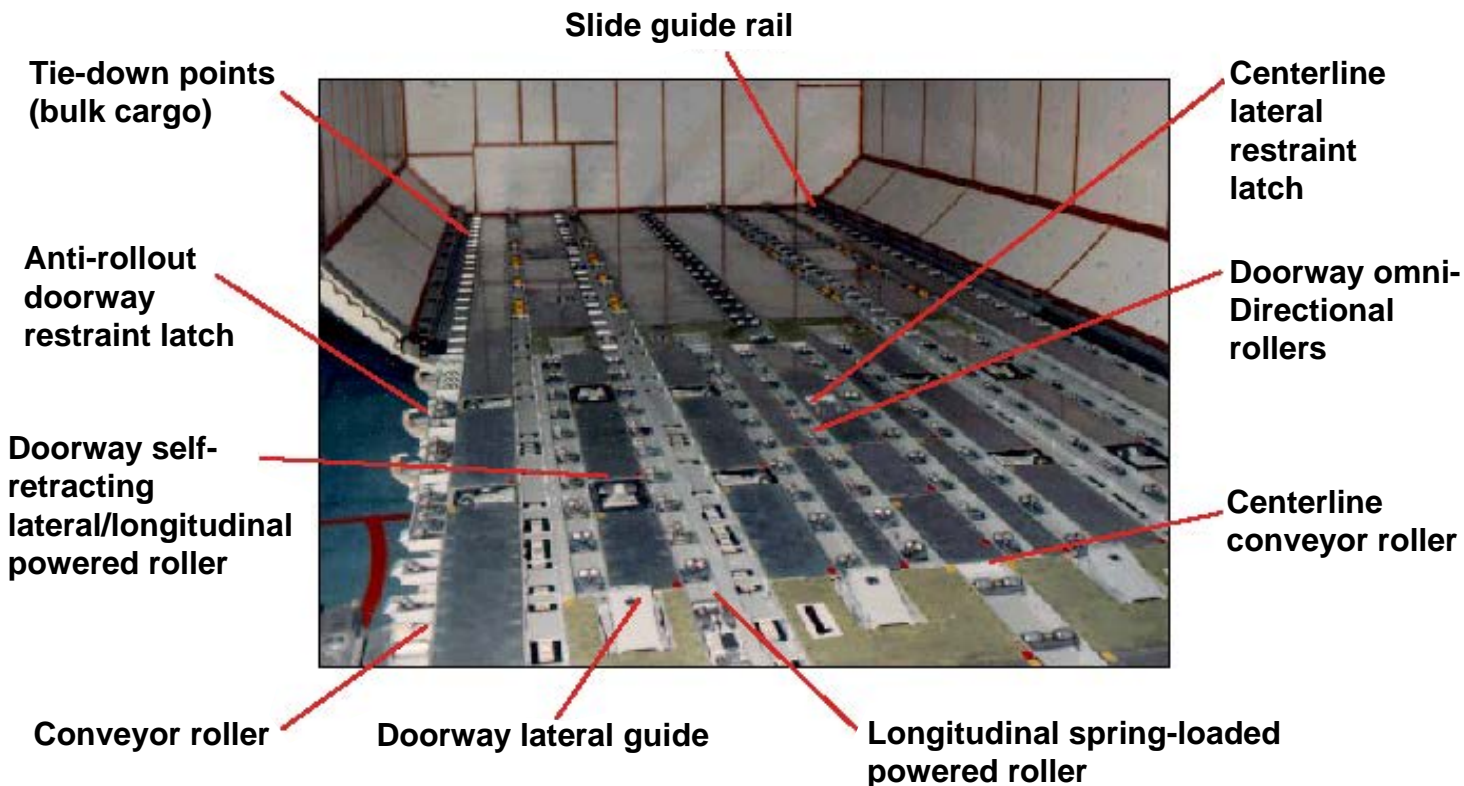
# MD-11BCF Main deck cargo door



- Normal cargo door operation employs an independent hydraulic system with pressure supplied by an electrically driven pump.
- If electrical power is not available, the cargo door can be operated with a manual hydraulic pump.

# MD-11BCF Fwd lower cargo compartment

## *Powered roller system*



# MD-11BCF Fwd lower cargo compartment

*Powered roller system*

**Cargo compartment**



**Cargo door/handling system  
control panel**



# MD-11BCF performance summary

## General Electric Engines

		MD-11BCF CF6-80C2D		MD-11BCF CF6-80C2D Option	
<b>Maximum Taxi Weight</b>	<b>kg (lb)</b>	<b>287,124</b>	(633,000)	<b>287,124</b>	(633,000)
<b>Maximum Takeoff Weight</b>	<b>kg (lb)</b>	<b>285,990</b>	(630,500)	<b>285,990</b>	(630,500)
<b>Maximum Landing Weight</b>	<b>kg (lb)</b>	<b>213,869</b>	(471,500)	<b>222,941</b>	(491,500)
<b>Maximum Zero Fuel Weight</b>	<b>kg (lb)</b>	<b>204,706</b>	(451,300)	<b>209,242</b>	(461,300)
<b>Estimated OEW (including tare)</b>	<b>kg (lb)</b>	<b>120,928</b>	(266,600)	<b>120,928</b>	(266,600)
<b>Tare</b>	<b>kg (lb)</b>	<b>4,853</b>	(10,700)	<b>4,853</b>	(10,700)
<b>Fuel Capacity</b>	<b>L (U.S.gal)</b>	<b>146,174</b>	(38,615)	<b>146,174</b>	(38,615)
<b>Revenue Payload</b>	<b>kg (lb)</b>	<b>83,779</b>	(184,700)	<b>88,314</b>	(194,700)
<b>Design Range</b>	<b>nmi (km)</b>	<b>3,971</b>	(7,354)	<b>3,483</b>	(6,451)
<b>Total Volume</b>	<b>m<sup>3</sup> (ft<sup>3</sup>)</b>	<b>577.0</b>	(20,378)	<b>577.0</b>	(20,378)
<b>Density</b>	<b>kg/m<sup>3</sup> (lb/ft<sup>3</sup>)</b>	<b>145.2</b>	(9.1)	<b>153.0</b>	(9.6)
<b>Main Deck Volume (Pallets)</b>	<b>m<sup>3</sup> (ft<sup>3</sup>)</b>	<b>445.1</b>	(15,718)	<b>445.1</b>	(15,718)
<b>96x125 x96</b>	<b>Quantity</b>		<b>24</b>		<b>24</b>
<b>96x125 x84</b>	<b>Quantity</b>		<b>2</b>		<b>2</b>
<b>Lower Deck Volume</b>	<b>m<sup>3</sup> (ft<sup>3</sup>)</b>	<b>117.5</b>	(4,150)	<b>117.5</b>	(4,150)
<b>96x125</b>	<b>Quantity</b>		<b>10</b>		<b>10</b>
<b>LD-3</b>	<b>Quantity</b>		<b>0</b>		<b>0</b>
<b>Bulk</b>	<b>m<sup>3</sup> (ft<sup>3</sup>)</b>	<b>14.4</b>	(510)	<b>14.4</b>	(510)

- Typical mission rules
- Nominal fuel burn + 4%

# MD-11BCF performance summary

## Pratt and Whitney Engines

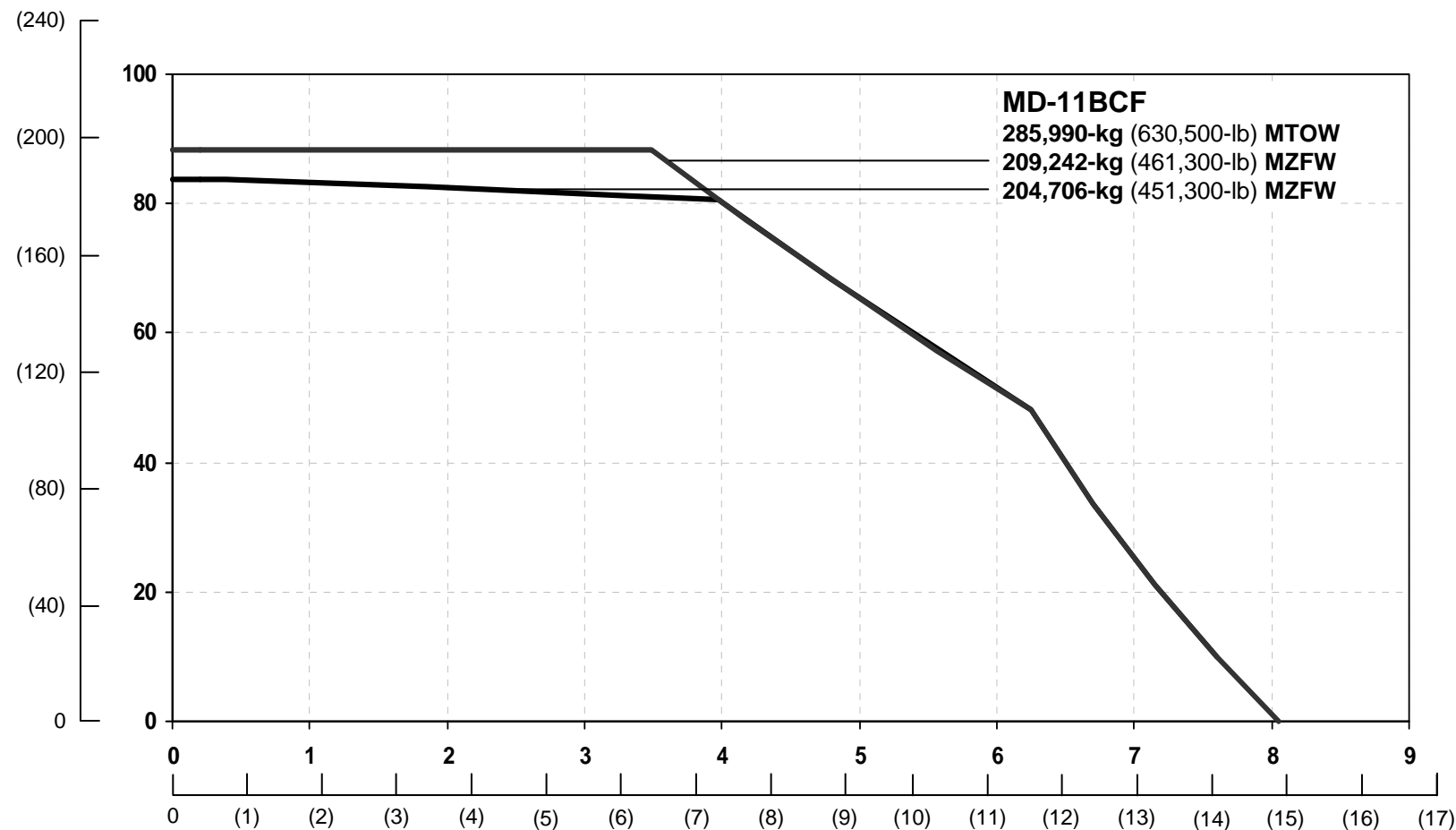
		MD-11BCF PW4462		MD-11BCF PW4462 Option	
Maximum Taxi Weight	kg (lb)	287,124	(633,000)	287,124	(633,000)
Maximum Takeoff Weight	kg (lb)	285,990	(630,500)	285,990	(630,500)
Maximum Landing Weight	kg (lb)	213,869	(471,500)	222,941	(491,500)
Maximum Zero Fuel Weight	kg (lb)	204,706	(451,300)	209,242	(461,300)
Estimated OEW (including tare)	kg (lb)	120,784	(266,284)	120,784	(266,284)
Tare	kg (lb)	4,853	(10,700)	4,853	(10,700)
Fuel Capacity	L (U.S. gal)	146,174	(38,615)	146,174	(38,615)
Revenue Payload	kg (lb)	83,922	(185,016)	88,458	(195,016)
Design Range	nmi (km)	3,927	(7,272)	3,412	(6,320)
Total Volume	m <sup>3</sup> (ft <sup>3</sup> )	576.5	(20,358)	576.5	(20,358)
Density	kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	145.6	(9.1)	153.4	(9.6)
Main Deck Volume (Pallets)	m <sup>3</sup> (ft <sup>3</sup> )	445.1	(15,718)	445.1	(15,718)
96x125 x96	Quantity		24		24
96x125 x84	Quantity		2		2
Lower Deck Volume	m <sup>3</sup> (ft <sup>3</sup> )	117.5	(4,150)	117.5	(4,150)
96x125	Quantity		10		10
LD-3	Quantity		0		0
Bulk	m <sup>3</sup> (ft <sup>3</sup> )	13.9	(490)	13.9	(490)

- Typical mission rules
- Nominal fuel burn + 4%

# MD-11BCF payload-range capability

## General Electric Engines

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



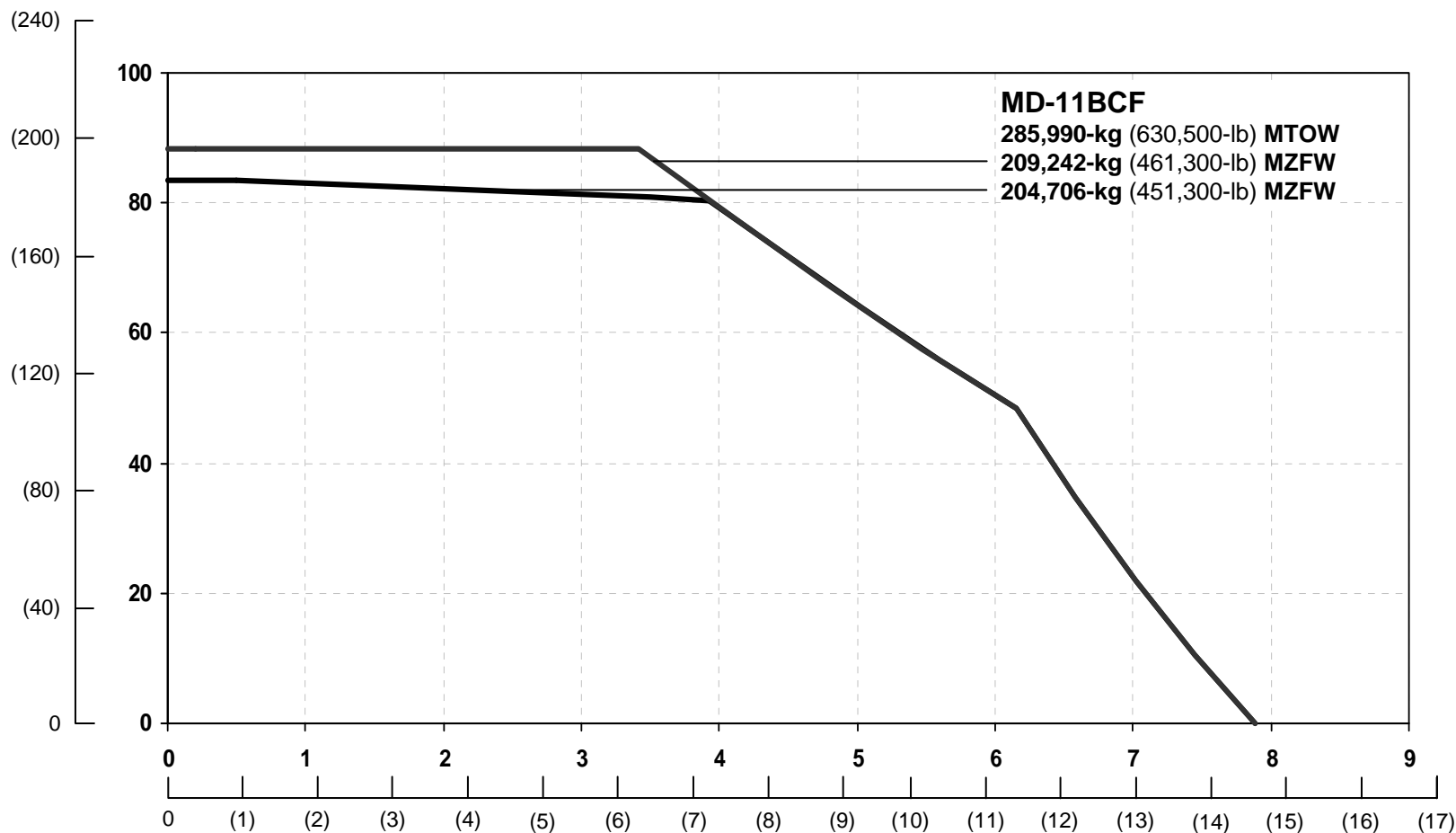
- Typical mission rules
- 200 nmi alternate

Range, 1,000 nmi (1,000 km)

# MD-11BCF payload-range capability

## Pratt and Whitney Engines

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



- Typical mission rules
- 200 nmi alternate

Range, 1,000 nmi (1,000 km)



# Range capability from Anchorage

## *Revenue Payload*

### MD-11BCF

285,990-kg (630,500-lb) MTOW  
83,779-kg (184,700-lb) payload

### MD-11BCF Option

285,990-kg (630,500-lb) MTOW  
84,314-kg (194,700-lb) payload

- GE engines
- Typical mission rules
- 85% annual winds
- Nominal fuel burn + 4%



# Range capability from Los Angeles

## *Revenue Payload*

### **MD-11BCF**

285,990-kg (630,500-lb) MTOW  
83,779-kg (184,700-lb) payload

### **MD-11BCF Option**

285,990-kg (630,500-lb) MTOW  
84,314-kg (194,700-lb) payload

- GE engines
- Typical mission rules
- 85% annual winds
- Nominal fuel burn + 4%



# Range capability from Tokyo

## Revenue Payload

### MD-11BCF

285,990-kg (630,500-lb) MTOW  
83,779-kg (184,700-lb) payload

### MD-11BCF Option

285,990-kg (630,500-lb) MTOW  
84,314-kg (194,700-lb) payload

- GE engines
- Typical mission rules
- 85% annual winds
- Nominal fuel burn + 4%



# Range capability from Hong Kong

## Revenue Payload

### MD-11BCF

285,990-kg (630,500-lb) MTOW  
83,779-kg (184,700-lb) payload

### MD-11BCF Option

285,990-kg (630,500-lb) MTOW  
84,314-kg (194,700-lb) payload

- GE engines
- Typical mission rules
- 85% annual winds
- Nominal fuel burn + 4%



# Range capability from Frankfurt

## Revenue Payload

### MD-11BCF

285,990-kg (630,500-lb) MTOW  
83,779-kg (184,700-lb) payload

### MD-11BCF Option

285,990-kg (630,500-lb) MTOW  
84,314-kg (194,700-lb) payload



- GE engines
- Typical mission rules
- 85% annual winds
- Nominal fuel burn + 4%

# MD-11 Flight Deck

StartupBoeing

