



Boeing B777-200F

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Photo Courtesy of Marc Najberg

The Boeing B777 family of aircraft has been a workhorse of long-haul travel for more than three decades. Naturally benefiting from the maturity of the product, the B777-200 freighters have also garnered substantial demand in the dedicated freighter segment, riding on the phaseout of the B767 freighters, which shouldered the responsibility prior to entry into service of the B777-200F. Additionally, with discontinuation in production of the B747F and no firm date on entry into service for the B777-8F, the B777-200F is the current front-runner in the widebody freighter segment until 2027 when it is expected to cease production.

The B777-200F has been a popular aircraft among logistics market leaders like FedEx and DHL, as well as airline operators such as Qatar, China Southern and Lufthansa (among others). The GE90-110/115 engine powers the passenger variant of the B777-200/300 as well as the B777-200F aircraft. Cockpit commonality and standard avionics package, combined with common maintenance infrastructure, provides operational and commercial advantages to airlines operating both passenger and freighter variants.

Among the widebody freighters, the B777-200F currently offers versatile and flexible operational capabilities due to its competitive payload and range capabilities as well as cargo deck capacity to accommodate 10-foot-tall pallets. It is fair to say that the

A330F has both less payload and less range, so it is not seen as a genuine competitor of the B777-200F. However, the A350F — expected to enter in to service in 2026 — is expected to be the first genuine challenger to Boeing’s monopoly since at least 2017 when the last A330 production freighter was delivered.

According to Boeing’s orders and deliveries status, there have been 353 total orders for the B777-200F, with delivery of 266 aircraft thus far. Approximately 95% of the global fleet continues to be in service, showcasing resilient demand from operators that appreciate the capability of the freighter with the remainder in storage. The surge in freighter demand during the COVID-19 pandemic proved beneficial for the B777-200F. Demand for new

	Payload	Range	Cargo Arrangements	Cross Section
B777F	Structure – 107,000 Kgs Revenue – 102,000 Kgs	4970 nmi	27 Main deck pallets (18301 Cubic feet volume)	10 Ft (3 mtr) tall pallets capacity
B767-300F	Structure – 56,600 Kgs Revenue – 52,400 Kgs	3255 nmi	31 Main deck pallets (11884 cubic feet volume)	8 Ft tall pallets capacity
B767-300 BCF	Structure – 56,500 Kgs Revenue – 51,600 Kgs	3345 nmi	24 Main deck pallets (11884 cubic feet volume)	8 Ft tall pallets capacity
B777-8F	Structure – 118,000 Kgs Revenue – 112,000 Kgs	4410 nmi	31 Main deck pallets	10 Ft (3 mtr) tall pallets capacity
A330-P2F	Structure – 62,000 Kgs	3661 nmi	27 Main deck pallets	8 Ft tall pallets capacity
A330-200F	Structure – 61,000 Kgs	4150 nmi	23 Main Deck pallets	8 Ft tall pallets capacity
A350F	Structure – 111,000 Kgs	4700 nmi	30 Main deck pallets	8 Ft tall pallets capacity

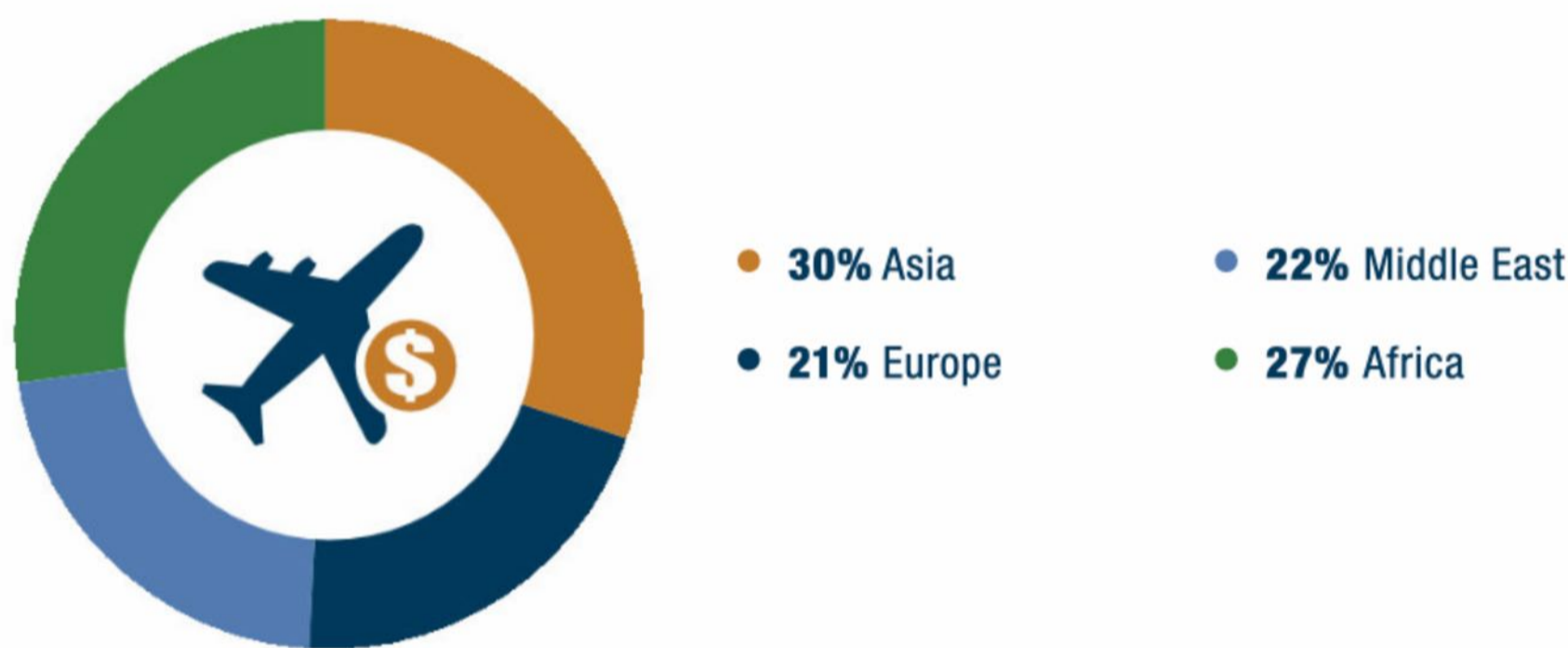
Source: Boeing and Airbus websites



Operator names for B777-200F	Asset count
Federal Express	57
Qatar Airways	26
Aerologic [Germany]	22
China Southern Airlines Cargo	17
China Cargo Airlines	14
Korean Air Lines	12
Emirates	11
Lufthansa Cargo	11
Ethiopian Airlines	10
Air China Cargo	9

Source: CAPA Database – June 2024

GEOGRAPHIC SPREAD – GLOBAL FLEET B777F



Source: CAPA Database – June 2024

production freighters peaked post the worst of the COVID-19 lockdowns from 2020 to 2022. There were 101 aircraft ordered between 2020 and 2024, reflecting optimism that the strong market conditions during COVID-19 would persist, along with concerns about lift with Boeing’s last off the line B747-8F delivered to Atlas Air in February 2023 combined with uncertainty around certification of new Boeing widebody production freighter available for delivery from 2028 onwards. This order flow represented approximately 30% of the overall order book for the aircraft in a span of four years.

In comparison, during the same four years, the B767-300F/BCF garnered 57 orders, while the B777-8F has an unfilled order book of 55 aircraft. If we consider the Airbus aircraft, the A350F has an order book of 55 aircraft as of May 2024 against the A330-200F,

which only saw 38 aircraft delivered through the program. This indicates that there is a competitive advantage with the B777-200F following the phaseout of B747Fs, the relatively low current order book of Airbus A350F and the possible discontinuation of the B767F program post completion of the current order book.

There has been good volume of passenger-to-freighter (P2F) conversions for A330-200/300 aircraft, though future conversion activity is uncertain given declining feedstock numbers, limited availability of conversion slots and the high cost of conversion for widebody assets that have combined to underpin relatively steady demand for the B777F assets.

The geographic spread of the B777-200F fleet globally is divided almost equally among the four major continents: Asia (30%), Middle East and Africa (22%), Europe (21%) and North

America (27%). The top 10 operators of the B777F aircraft are listed on the left.

Despite growing available belly capacity, dedicated freighters will need to satisfy growing demand for air cargo created by e-commerce, pharmaceutical and high value manufacturing sectors. As per Boeing and Airbus future forecasts, by 2041, the global fleet of freighters is expected to grow beyond 2,500 aircraft. This indicates sustained demand for the B777-200F in the near future. This could be impacted, however, by demand for competing freighter aircraft as well as sustainable solutions to overcome supply chain constraints and slot availability at MROs.

Market Outlook

As per the IATA Air Cargo Market Analysis Report dated April 2024, global international traffic rose by 11.6% compared to April 2023, supported by all regions and major trade lanes. Airlines from Asia Pacific and Europe recorded the highest growth rates. A primary driver for air cargo demand is global trade activity, so the future for freighter aircraft depends heavily on rising demand for high value manufactured goods boosted by the ongoing recovery of the affected supply chains.

As the favorable backdrop continues to emerge, the freighter segment is likely to witness a proportional increase in fleet capacity. Currently, the bottleneck in the supply of passenger-to-freighter aircraft is coming at the conversion stage. Slots at most major conversion facilities are booked up until 2025, and in some instances until 2026. However, due to delays in new production aircraft deliveries, extended operation of older aircraft is leading to limited availability of feedstock aircraft, amplifying the capacity constraint, and hence the demand for B777-200Fs.

On the other hand, the cost of conversion of passenger assets is an

B777F – Acumen Values as of 1st Jun 2024 (in Million US \$)

Year of build	Current Market Value	Current Base Value	Future Base Values at 1.5 % inflation											
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
2024	170.658	170.658	160.180	152.046	144.406	137.065	130.045	123.347	116.475	109.953	103.904	98.144	92.666	87.454
2023	164.707	164.707	156.343	148.487	140.939	133.721	126.833	119.767	113.060	106.841	100.918	95.286	89.926	84.866
2022	157.356	157.356	149.449	141.852	134.587	127.655	120.543	113.793	107.533	101.572	95.903	90.508	85.416	80.581
2021	151.043	151.043	143.365	136.023	129.016	121.829	115.007	108.680	102.655	96.926	91.474	86.327	81.440	76.981
2020	144.568	144.568	137.163	130.099	122.851	115.971	109.592	103.516	97.739	92.241	87.051	82.123	77.626	73.215
2019	137.552	137.552	130.467	123.199	116.300	109.902	103.810	98.016	92.503	87.297	82.356	77.846	73.422	69.084
2018	130.176	130.176	122.924	116.040	109.657	103.578	97.797	92.296	87.103	82.172	77.673	73.258	68.930	64.742
2017	122.132	122.132	115.293	108.951	102.910	97.167	91.701	86.541	81.643	77.172	72.786	68.486	64.325	60.167
2014	100.039	100.039	94.455	89.143	84.127	79.364	75.019	70.755	66.574	62.530	58.488	54.708	51.150	47.791
2011	82.792	82.792	78.106	73.829	69.633	65.519	61.538	57.561	53.840	50.338	47.033	43.922	40.994	38.222
2008	67.796	67.796	63.790	59.915	56.042	52.420	49.010	45.793	42.763	39.912	37.214	34.667	32.267	30.010

Aircraft Specifications: MTOW- 345000 Kgs, Engine- GE 90-115B
Inflation Assumption: Annual Inflation of 1.5% for Future Base Values

Maintenance Assumption: Half-Life Condition.
 All values are in \$US millions (ISTAT definition applies)

important consideration. As per industry sources, the conversion of a B777-200 passenger aircraft to a dedicated freighter can cost US\$34-38 million. This is a significant expense in addition

to the ground time of 180 days or more for the conversion. Therefore, availability of slots, an ideal feedstock candidate asset and the cost of conversion are a trifecta of important factors that impact

the desirability of dedicated freighter aircraft. This has an impact on the continued retention of market value for existing dedicated production B777-200Fs in the market. 

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