

Type : *Airbus A321neo*

Model : *A321-200neo*

Family : *A320 family*

Airframe Manufacturer : *Airbus Industries*

Model Launch : *2016*

No of Engines : *2*

Engine Type - Model :

CFM LEAP 1A / PW1100G-JM

Seat Capacity :

180 to 220 passengers
(typical two-class interior layout)

244 passengers
(higher-density layout)

Weight and Payload :

97,000 Kgs
Max Design Take Off Weight (MDTOW)

25,500 Kgs
Max Payload Weight

Range Capacity :

3,996 nm / 7,400 km
(Long Range Version-206 Pax)

Other Important Features :

Sharklet wingtip devices, New engine options,
Cabin-Flex

Appraiser's Opinion

A321neo



Amit Tyagi

ISTAT Certified Senior Appraiser

Appraiser's Opinion

In December 2010, Airbus unveiled the A321neo, an advanced iteration and successor to the A321ceo. Production of the A321neo commenced in 2016, with final assembly taking place in Hamburg, Germany. The aircraft celebrated its inaugural commercial flight with Virgin America on May 31, 2017, setting the stage for its impressive journey in the aviation industry.

Boeing unveiled its rival, the 737 MAX, a year later, marking the beginning of a vibrant competitive landscape. Among the MAX family variants, the Boeing 737 Max 8 stands out as "undoubtedly the most favoured and popular," boasting the largest customer base. The majority of orders gravitate towards the Max 8, making the Boeing a robust competitor to the A320neo. However, Boeing faces a challenge from Airbus in the A321 segment, given that the Max 10 is still undergoing testing. While the Max 9 proves to be an efficient aircraft, it lags behind in terms of size compared with the A321, emphasising its significance for low-cost carriers and airlines prioritising substantial seat capacity. Notably, the Max 9 accommodates a maximum of 220 passengers, underscoring its appeal for those seeking a balance between efficiency and a moderately sized seating capacity.

The A321neo, the elongated member of Airbus' single-aisle A320 Family, is designed to accommodate 180 to 220 passengers in a typical two-class layout and up to 244 passengers in a higher-density "Cabin Flex" arrangement. With an impressive 95% airframe commonality with the A320 family, it shares a common type rating, allowing A320 family pilots to seamlessly operate it without additional training. As of November 2023, a remarkable 5,613 A321neo aircraft have been ordered by over 85 customers, with an impressive 1,210 successfully delivered.

Equipped with sharklet technology and offering two engine choices, CFM International's LEAP 1A and Pratt & Whitney's PurePower PW1100G-JM, the A321neo boasts remarkable per-seat fuel improvements of 20%, an extended range of up to 500 nm/900 km, or the capacity to carry an additional 2 tonnes of weight, according to Airbus. According to CAPA data from December 2023, 55.2% of A321neo aircraft are powered by PW1100G-JM engines, while the remaining 44.8% utilise the CFM Leap 1A.

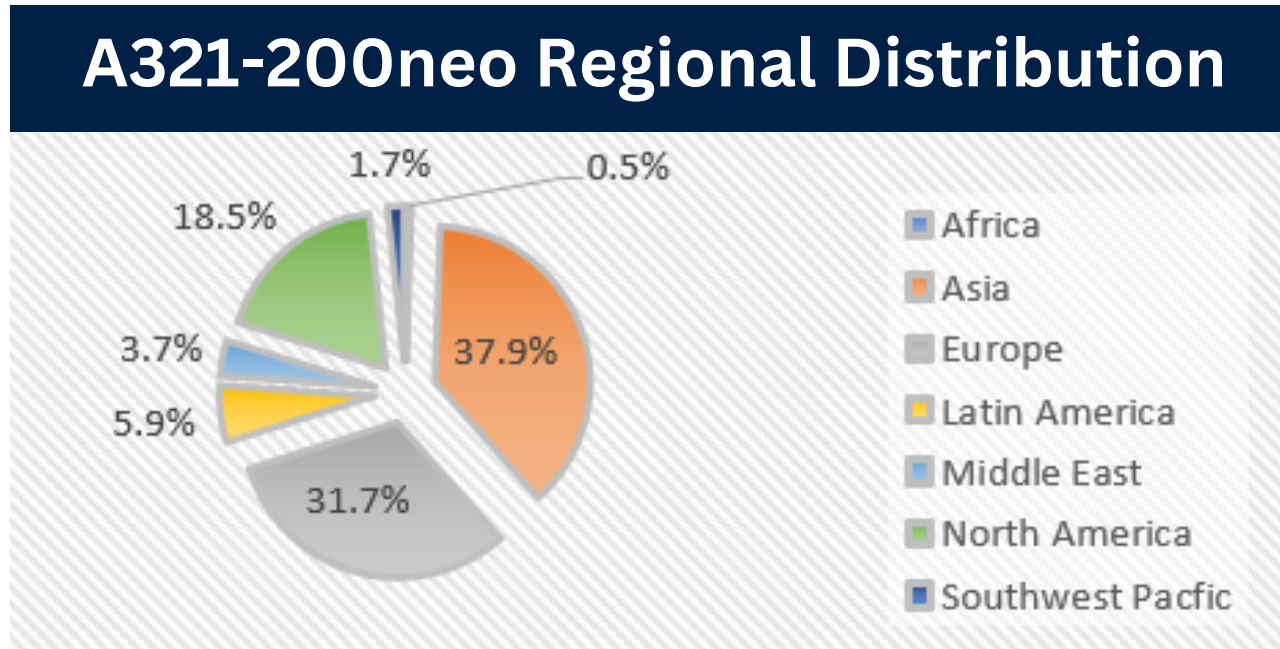
However, the PW1000G family faced challenges, particularly related to the contaminated powdered metal used in manufacturing between Q4 2015 and Q3 2021. Pratt identified concerns about potential cracking in stage 1 and stage 2 disks in the high-pressure turbine, leading to the removal and enhanced inspection of approximately 200 PW1100 engines by mid-September 2023. This issue has grounded over 8% of the A321neo fleet. As per P&W's Sep 23 financial report, approximately 600 to 700 incremental shop visits are anticipated from 2023 to 2026 and most additional engine removals will occur in 2023 and early 2024.

The Airbus A321neo aircraft comes in three versions: the standard A321neo, the A321neo LR (Long Range), and the A321neo XLR (Extra Long Range). Each variant offers distinct capabilities tailored to diverse operational requirements. The A321neo LR extends its range, capable of flying routes up to 4,000 nm with 206 passengers, achieved by utilising extra fuel in three additional centre tanks (ACT). On the other hand, the A321neo XLR, true to its name, offers an even greater range of up to 4,700 nm in a comfortable two-class layout. This is made possible by an increased maximum takeoff weight (MTOW) of 101 tonnes, allowing the jetliner to be equipped with a permanent rear centre tank (carrying 12,900 litres of fuel) and an optional forward ACT. Airbus asserts that the XLR's aerodynamic-enhancing sharklets on the wings, coupled with its fuel-efficient engines, ensure outstanding environmental performance, boasting a 30% lower fuel burn per seat and a noise footprint that is 50% lower for passengers and airports. Airbus is actively working towards the A321XLR's entry into service in 2024, positioning it as the single-aisle aircraft with the longest range in the industry.

With regards to the geographical spread of the A321neo, most of the fleet is concentrated in Asia (37.9%), followed by Europe (31.7%), North America (18.5%), Latin America (5.9%), Middle East (3.7%), Southwest Pacific (1.7%) and Africa (0.5%).

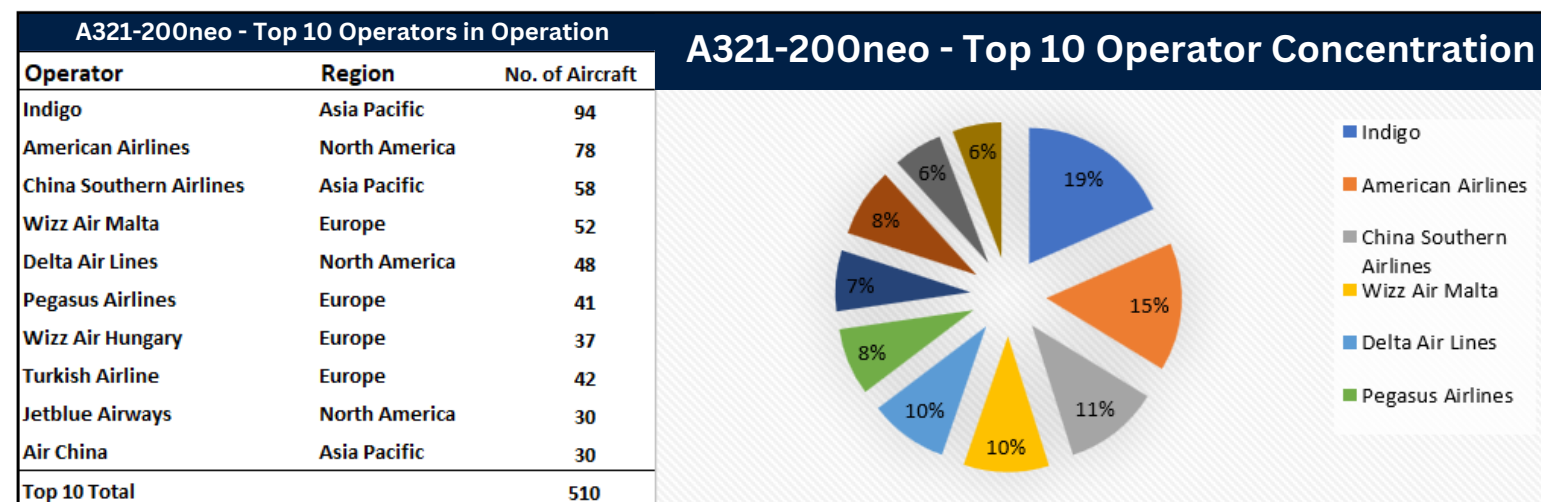
Appraiser's Opinion (cont..)

Market Outlook



Source : CAPA | Jan 2024

Indigo leads the pack with the most extensive A321-200neo fleet, trailed closely by American Airlines and China Southern. The accompanying graph provides a visual depiction of the top 10 operators of the A321-200neo fleet.



Source : CAPA | Jan 2024

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In 2023, the aviation industry made substantial strides towards reclaiming pre-pandemic activity levels, accompanied by a resurgence in financial profitability. The October 2023 IATA report highlighted a remarkable 31.2% year-on-year increase in revenue passenger-kilometers, narrowing the gap to pre-Covid levels to a mere 2%. Industry-wide available seat-kilometers also surged by 29.4% year-on-year, recovering to 97.0% of pre-pandemic capacity, while the global passenger load factor maintained a robust 83%.

The industry is currently undergoing a recovery phase following the unprecedented loss of nearly USD 140 billion in 2020. The net profit forecast for the entire industry this year is anticipated to reach USD 23.3 billion, signaling a positive trend. However, it is important to note that the current levels of profitability, though encouraging, fall short of being exceptional.

The A321neo continues to experience high demand in the current market, and while deliveries in 2023 are projected to surpass those of 2022, they are expected to fall short of 2019 levels. Ongoing supply chain issues have prompted a downward revision in the number of aircraft scheduled for delivery in 2023, and transactions involving the A321neo are conspicuously scarce in the present market conditions.

Furthermore, there is a discernible preference for older-generation CEO and NG family assets among buyers, driven primarily by the necessity to navigate supply chain challenges. Nevertheless, airlines globally are actively pursuing the acquisition of more fuel-efficient and quieter equipment, a market trend that has persistently defied the challenges posed by the pandemic. Importantly, the aviation industry foresees a surge in the adoption of Sustainable Aviation Fuel (SAF) and carbon credits as integral components of its commitment to reducing carbon footprint.

The International Air Transport Association (IATA) projects a substantial increase in SAF production, potentially reaching 0.53% of airlines' total fuel consumption by 2024. This shift towards sustainable practices is anticipated to make a significant contribution, adding USD 2.4 billion to next year's fuel expenditure.

Value Projection

Source : fin-S Online Valuation Application - SPARTA

A321neo - Acumen Values as of 1st Jan 2024

Year of build	Current market value	Current base value	Future Base Values at 0% inflation												
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2016	39.6631	39.6631	37.1671	34.8282	32.5796	30.4739	28.4863	26.6007	24.8209	23.1269	21.5165	19.9258	18.4048	16.9762	15.6297
2017	41.8800	41.8800	39.2585	36.8011	34.4852	32.2587	30.1737	28.2058	26.3387	24.5764	22.8991	21.3046	19.7296	18.2236	16.8090
2018	43.9994	43.9994	41.2570	38.6854	36.2639	33.9818	31.7878	29.7333	27.7941	25.9543	24.2177	22.5648	20.9936	19.4416	17.9576
2019	45.9943	45.9943	43.1367	40.4567	37.9350	35.5604	33.3227	31.1712	29.1565	27.2549	25.4508	23.7479	22.1271	20.5864	19.0645
2020	47.7853	47.7853	44.8324	42.0619	39.4486	36.9898	34.6744	32.4924	30.3945	28.4301	26.5758	24.8167	23.1562	21.5758	20.0734
2021	49.6794	49.6794	46.7338	43.9629	41.2461	38.6835	36.2724	34.0019	31.8622	29.8051	27.8787	26.0604	24.3354	22.7071	21.1574
2022	51.7526	51.7526	48.6897	45.8028	42.9723	40.3025	37.7905	35.4249	33.1957	31.0524	29.0454	27.1511	25.3538	23.6574	22.0428
2023	53.9893	53.9893	50.6867	47.6868	44.8594	42.0872	39.4724	37.0121	34.6953	32.5120	30.4129	28.4472	26.5918	24.8316	23.1702
2024	58.0402	58.0402	53.7253	50.4388	47.4536	44.6400	41.8814	39.2794	36.8311	34.5256	32.3530	30.2641	28.3081	26.4618	24.7102

Logs / Base Value

EXPORT

BV and CMV^(DEFAULT) FBV

Asset Type: Aircraft Engine

Fleet Type Serial Number Aircraft Type *

Enter Serial No. **A321-neo**

Date of Manufacture * Engine Type *

15-01-2023 **PW1130G-JM**

Max Take Off Weight * Lbs Kgs

196209.4 **89000.0000**

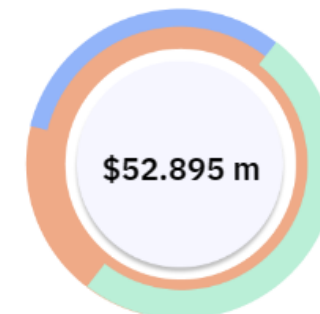
Modifications/Enhancements

Maintenance Condition* Half Life Full Life Both

Value as Of *

08-01-2024

Value as of: Jan 08, 2024



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