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**A320 SINGLE-AISLE FAMILY**

With around 8,400 aircraft ordered, and around 5,100 aircraft delivered to over 330 customers and operators worldwide, the A318, A319, A320 and A321 make up the world's best-selling single-aisle aircraft family and are the preferred choice with traditional airlines and passengers, as well as with the fast-growing low-cost carrier market for which it is now the reference.

**A320neo**

The A320neo (new engine option) is the latest of many product upgrades as Airbus continues to invest around 250 million euros a year in the A320 Family to maintain its position as the most advanced and fuel-efficient single-aisle aircraft family. These new A319, A320 and A321 models were announced in December 2010 and feature new engines (the PurePower PW1100G from Pratt and Whitney or the LEAP-X from CFM) and large wingtip devices known as Sharklets. Together they result in a 15% fuel burn reduction, corresponding to an annual CO<sub>2</sub> reduction of 3,600 tonnes per aircraft. The A321neo is the ideal replacement for hundreds of aging 180 seat aircraft currently in service.

Meanwhile, Sharklets will be available as a forward-fit option from around the end of 2012 and are expected to result in at least 3.5 percent reduced fuelburn over longer sectors, corresponding to an annual CO<sub>2</sub> reduction of around 1,000 tonnes per aircraft. The A320 will be the first model fitted with Sharklets.

**The industry's best cabin**

The A320 Family is designed to optimise revenue through cabin adaptability and passenger comfort. The optimised cabin cross-section – the widest single-aisle fuselage on the market – sets the standards for passenger cabin adaptability in this segment. It allows for top-of-the-range comfort or an extra-wide aisle for fast turnarounds. Furthermore, the superior cabin size and shape results in larger overhead stowage compartments that offer more convenience and lead to faster boarding and deplaning. The wider fuselage also provides unmatched cargo capability and the A319, A320 and A321 are unique in their category in offering a containerised cargo loading system. This system is compatible with the worldwide standard wide-body system, which reduces ground equipment and handling costs, and reduces the need for manual loading of individual bags.

Airbus now offers operators of earlier A320 Family aircraft the option of retrofitting the fresh new look, significant increase in overhead stowage capacity, dramatic ambience lighting options and noticeable noise reduction of its latest factory standard of cabin.

**Eco-efficient operations with 'RNP-AR' technology**

A320 Family operators now can also benefit from enhanced 'Required Navigation Performance – Authorisation Required' (RNP-AR) combined with 'Required Time of Arrival' (RTA) time management. This allows the aircraft to conduct a 'continuous descent approach' (CDA) which is more efficient than the traditional 'dive and drive'. The net benefits are lower noise and fuel burn since less thrust is required. RNP-AR also enhances accessibility by enabling specially trained and authorised pilots to fly to lower altitudes with a more precise and efficient route into the airport, saving fuel and emissions and helping reduce the impact of bad weather on services.

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**A320 Family overview – by model**

The original **A320** entered airline service in April 1988 and rapidly established itself as the industry standard for passenger comfort and economy on short to medium-haul sectors. Typically seating 150 passengers in two classes or up to 180 in a high-density layout for charter and low-cost operations, the A320 is in widespread service around the world, flying routes ranging from short European commuter sectors, charter operations to coast-to-coast US flights.

The largest member of the A320 Family, the **A321**, entered service in January 1994 with a range of up to 5,930km / 3,200nm. With an unmatched operating cost per seat it typically carries 185 passengers in a two class configuration whilst offering unbeatable economics with its 220 passenger high density seating for charter and low-cost operators.

The **A319** is slightly smaller than the A320 and was first delivered in April 1996. It continues to prove its versatility, enabling carriers to benefit from its range options and seat layout flexibility. In addition to the standard 124-seat model, which has a range of up to 6,930km / 3,740nm, Airbus offers an option, as ordered by an increasing number of low-cost airlines, allowing increased seating efficiency of up to 156 seats.

The smallest member of the A320 Family is the **A318** which entered service in July 2003. This aircraft has a range of up to 5,750km / 3,100nm, and typically accommodates 107 passengers in a two-class layout and up to 132 passengers in a single-class layout. It has unbeatable take-off and landing performance, requiring less runway length than comparable aircraft thereby providing operators with access to a greater diversity of airfields.

**Family Commonality benefits**

The A320 Family profits from the unique benefits of Airbus operational commonality, providing operators with tremendous flexibility in matching the right aircraft to specific route requirements. All A320 Family aircraft share the same 'Type Rating', allowing pilots to fly any of the members of the Family after attending only one training course and enabling the same team of mechanics to maintain the aircraft. With only minimal additional training pilots can transition from these to larger long-range aircraft quickly and simply thanks to the unique Airbus family concept and the exceptional degree of operational commonality. The twin-engine A319, A320 and A321 can be powered by either CFM International CFM56 or International Aero Engines V2500 engines (plus CFM LEAP-X or Pratt and Whitney PW1100G engines from 2015 for the A320neo Family). All A320 Family members are approved for 180-minute ETOPS operations.

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