

New MC-21-300 Commercial Airliner Has Completed Maiden Flight

Defense-aerospace



The MC-21 is Russia's entry into the narrowbody airliner market, where it will compete with established products from Airbus and Boeing as well as China's C-919, with Japan's Mitsubishi Regional Jet waiting in the wings. (Irkut photo)

On 28 May, 2017, the maiden flight of MC-21-300 commercial aircraft took place at the airfield of Irkutsk Aviation Plant, the affiliate of Irkut Corporation (a UAC member).

The duration of the flight was 30 minutes at the altitude of 1,000 meters, at the speed of 300 km/hour.

The flight plan included checking of in-flight stability and controllability, and also the controllability of the power plant. According to the program, during the flight a simulated landing approach was performed, followed by a flight over the runway, climbing and turning. This technique is typical for the maiden flight of new types of aircraft.

The aircraft was piloted by the crew commander Oleg Kononenko, test pilot, Hero of Russia, and the copilot Roman Taskayev, test-pilot, Hero of Russia.

Oleg Kononenko reported, "flight mission is accomplished. The flight went in the normal mode. There are no obstacles revealed preventing the tests continuation".

Roman Taskayev noted, that "characteristics and operational modes of the power plant are confirmed, all aircraft systems operated without glitches."

Oleg Demchenko, the President of Irkut Corporation, stated, "today is the historic day for our personnel and the whole big team, which works on creation of MC-21 aircraft. We put the most advanced technical solutions in our aircraft, to provide enhanced comfort for passengers

and attractive economic characteristics for air carriers. I am happy to declare the maiden flight of the MC-21 aircraft has been successfully accomplished. I congratulate all project participants on our common holiday!"

Yury Slyusar, the President of United Aircraft Corporation (UAC), stressed, "MC-21 is created in a wide cooperation, where together with Irkut, other enterprises of the United Aircraft Corporation are actively participating, namely Aerocomposite company, Ulyanovsk and Voronezh aircraft plants, UAC Integration. Center in Moscow. This is an important stage in the formation of the new UAC industrial model. According to our estimates, the global demand in the MC-21 segment will be about 15,000 new aircraft in the next 20 years. I'm sure the airlines will appreciate our new aircraft".

MC-21-300 New Generation Commercial Aircraft

MC-21-300 new generation aircraft with capacity of 163 to 211 passengers targets the most massive segment of aviation market.

MC-21 aircraft provides passengers with the qualitatively new level of comfort, due to the biggest fuselage diameter in the category of narrow-body aircraft. This design decision significantly widens private space of each passenger, ensures free passage of passenger and service trolley over the aisle, and shortens airport turnover time. Natural lighting of the passenger cabin is enhanced due to big windows. Comfortable air pressure and advanced microclimate will be maintained in the aircraft.

MC-21 aircraft features an innovative ergonomic pilot cabin.

High demands for comfort and economic effectiveness of the aircraft pushed forward introduction of advanced technical solutions in aerodynamics, engine-building, and avionics.

MC-21 aircraft is superior to existing counterparts in terms of flight-technical characteristics and efficiency.

The best Russian and international companies participating in MC-21 program fully comply with their obligations, while introducing their most advanced design solutions.

The major contributor to the enhancement of flight-technical characteristics of the aircraft is the wing made of polymer composite materials, the first-in-the-world one developed for narrow-body aircraft with the capacity of over 130 passengers. The share of composites in MC-21 design exceeding 30% is the unique for this category of aircraft.

For the first time in the history of Russian aircraft manufacturing, the airliner is offered to the customers with two options of power plant - PW1400G of Pratt & Whitney Company (USA) or PD-14 of United Engine Corporation (Russia). New-generation engines feature reduced fuel consumption, low noise and hazardous emissions. MC-21 aircraft meets prospective environmental requirements.

Calculated reduction of direct operational costs for MC-21 is 12-15% lower than for counterparts.

The initial portfolio of firm orders for 175 MC-21 aircraft provides utilization of production capacity in the coming years. All firm contracts are prepaid.

MC-21-300 Flight Performance

- Dense layout capacity 211 seats
- Maximum takeoff weight 79,250 kg
- Maximum payload 22,600 kg
 - Maximum flight range 6,000 km
- Dimensions
 - Length 42.2 m
 - Wing span 35.9 m
 - Height 11.5 m