

Michelin Air X homologated to fit the Embraer E170

Following a rigorous battery of tests, Embraer has decided to upgrade its Embraer E170 with Michelin Air X radial tires, featuring the patented Near Zero Growth (NZG) technology, which will be fitted to the regional jet aircraft.

The Embraer E170 was launched in 2004, and was originally fitted with bias tires. In 2010, Michelin was the first radial tire to be approved on the E170 with the Michelin Air X M19601 tire. Since, the Embraer and Michelin teams started to work hand-in-hand to better understand the sensitivity of the twinned tires on the landing gear to "shimmy" (a system resonance, especially during high speed descents and landings). The new tire has been modified to desensitize this effect, with Michelin engineers using a technology imported from bicycle tires. This change heralded the development of the Michelin Air X M19602, which has been tested for landings up to 190 knots (352 km/h), and the re-homologation of Michelin radial tires on the Embraer E170.

NZG technology is designed to ensure minimal tire growth: aircraft tires have very high inflation pressures (15 bar – compared to passenger car tires which are inflated to 2.5 bar) to carry the high aircraft weights. At the high speeds required for take-off and landing, an aircraft tire can 'grow' due to the high centrifugal forces. NZG technology minimizes tire diameter growth, and consequently tires are more durable and resistant to foreign object damage.

The combination of Michelin Air X tires and NZG technology reduces overall operational costs compared to a standard radial tire. This result is achieved through an increased number of landings (up to 30% more), improved fuel efficiency and exceptional damage resistance. NZG technology also increases tire robustness and reduces fuel consumption, leading to lower CO₂ emissions.

The Michelin Air X M19602 is available for the Embraer E170 main gear.

Michelin, the leading mobility company, is dedicated to enhancing its clients' mobility, sustainably; designing and distributing the most suitable tires, services and solutions for its clients' needs; providing digital services, maps and guides to help enrich trips and travels and make them unique experiences; and developing high-technology materials that serve a variety of industries. Headquartered in Clermont-Ferrand, France, Michelin is present in 170 countries, has more than 125,000 employees and operates 67 tire production facilities which together produced around 190 million tires in 2018. (www.michelin.com)