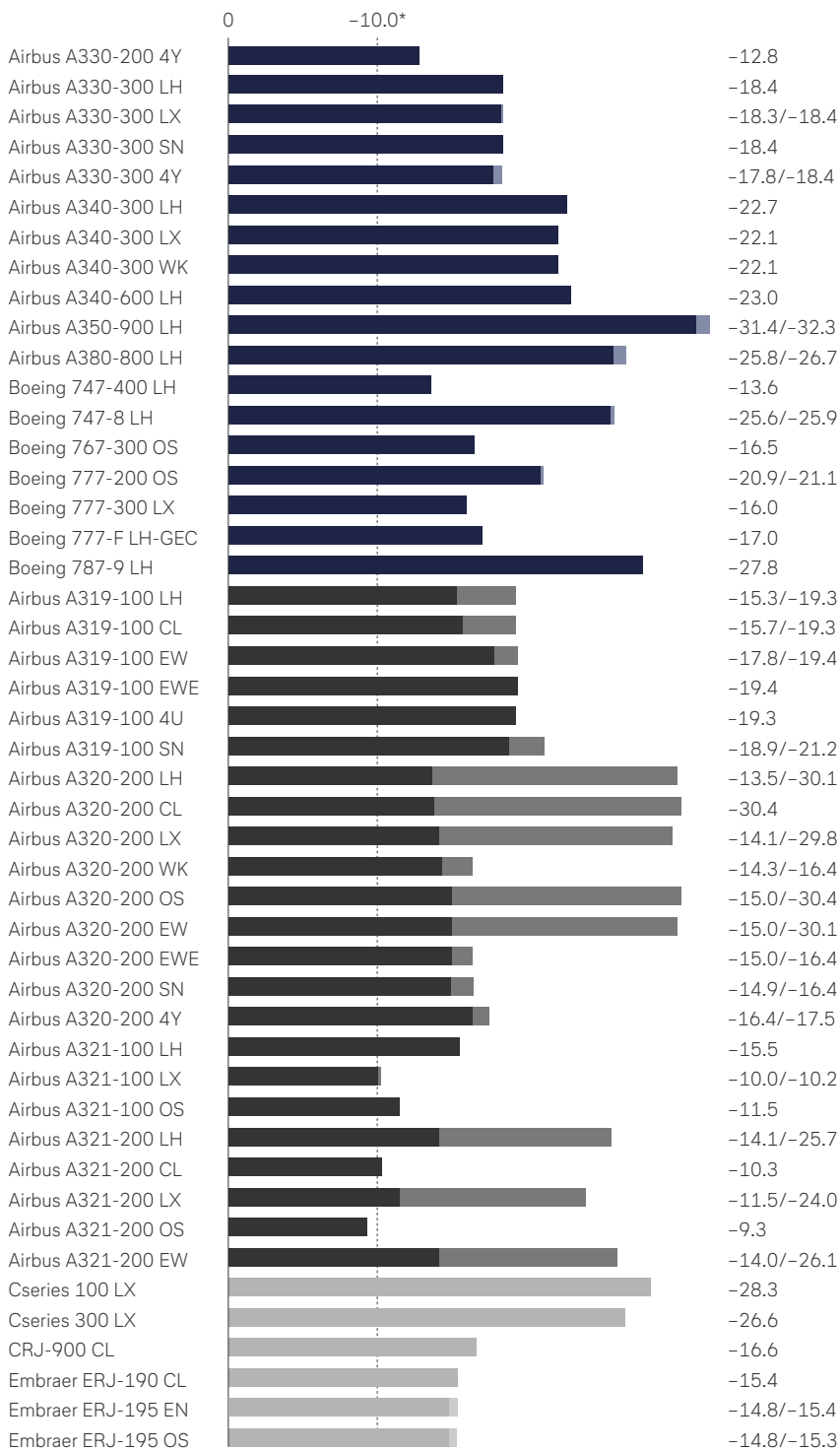




MOST STRINGENT NOISE STANDARDS FOR THE LUFTHANSA GROUP'S FLEET

MARGIN BELOW THE NOISE LIMIT OF ICAO CHAPTER 3 AND CHAPTER 4

Reporting date October 28, 2023, in EPNdB



The Lufthansa Group determines the effect of modernization concerning noise abatement of the operative fleet by means of the performance indicator “number of aircraft that meet or exceed the so-called ‘minus-10dB criterium’ set by the ICAO Chapter 4 standard”. This standard defines noise limits and stipulates that all aircraft newly licensed from 2006 to the end of 2017 must cumulatively fulfill the Chapter 3 noise limits by a margin of 10 decibels or more. This “minus-10EPNdB criterium” (Effective Perceived Noise dB) is represented by the vertical dashed line in the overview to the left. In 2023, 99.6 percent of the aircraft – thus virtually the entire operational Group fleet – met this criterium.

The limits depend on the aircraft’s maximum takeoff weight and number of engines. The bar chart indicates the sum of the differences between the measured value and the threshold value at the three measuring points by type of aircraft (cumulative margin). Where necessary, the values are based on the reduced maximum takeoff weight prevailing in flight operations. The individual noise certificate data of all Group aircraft is included in the evaluation methodology. Different versions of an aircraft and its engines by year of construction are thus better taken into account. Accordingly, the value ranges from the lowest to the highest cumulative margin are indicated for many fleets. The analysis also takes into account any modifications to aircraft or engines that have been made in the meantime, thereby leading to modified noise data and cumulative margins in certain cases. Furthermore, additions and withdrawals in individual fleets lead to changes in the value ranges reported.

The data to calculate the indicator is gathered on the qualifying date “end of summer flight schedule”. All aircraft in the possession of the individual flight-operating companies at the qualifying date are taken into account for the calculation of the performance indicator.

Grouping of aircraft types according to MTOW (maximum takeoff weight):

- under 50t • 50 to 150t • more than 150t

This division generally corresponds to a grouping of regional, continental, and intercontinental aircraft.

* ICAO Chapter 4 limit, which has been effective for a new aircraft since 2006: -10 EPNdB when compared to chapter 3.

LH = Lufthansa
SN = Brussels Airlines
CL = Lufthansa CityLine
4U = Germanwings

EN = Air Dolomiti
EW = Eurowings
EWE = Eurowings Europe
LX = SWISS

OS = Austrian Airlines
WK = Edelweiss Air
4Y = Discover Airlines
LH-GEC = Lufthansa Cargo