

Airports & Acoustics

THE FACTS

The aviation industry is firmly back on its feet and there are no signs of its growth slowing down. New airports, terminals and runways are being built with plans for many more in the future.

544 Planned new airports and runways

22.2
MILLION
Total No of flights globally in 2021

Source: www.financesonline.com

Source: www.stay-grounded.org

The World's Busiest Airports

	4,747,367	ATL	Hartsfield-Jackson Atlanta International Airport
	4,127,704	DXB	Dubai International Airport
	3,877,164	HND	Tokyo Haneda International Airport
	3,753,858	DFW	Dallas / Fort Worth International Airport
	3,709,394	DEN	Denver International Airport
	3,676,067	LHR	London Heathrow Airport
	3,618,433	ORD	O'Hare International Airport
	3,470,696	IST	Istanbul Airport
	3,413,855	LAX	Los Angeles International Airport
	3,380,205	DEL	Delhi

Figures shown are measured in 'seats occupied' for 2022

Source: www.oag.com

Key numbers

Airports require high acoustic performance to create a relaxing atmosphere – blocking out the loud sounds of aircraft and high traffic noises.

>110 dBA

The maximum sound level when starting engines of a wide-body aircraft, as measured at a distance of 20m from the nearest aircraft engine

60 dBA

The allowable [equivalent] sound level in the check-in and waiting areas for airport passengers

1 - 1.5 sec

The allowable reverberation time at mid frequencies for passenger check-in and waiting areas depending on the air volume of the room

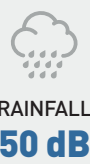
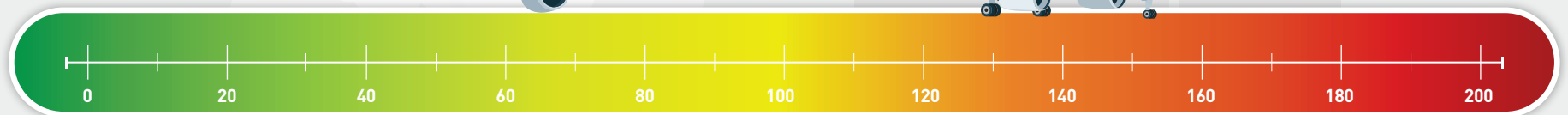
Sound level comparisons

The sound level of typical daytime activities can vary between 40 dB and 85 dB. Typical aircraft noise levels are between 65 dB and 95 dB. Very close to a runway, an aircraft could be as loud as 130 dB.

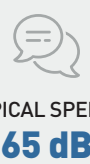
Aircrafts flying
65 dB - 95 dB



Aircraft takeoff
up to 130 dB



RAINFALL
50 dB



TYPICAL SPEECH
65 dB



BUSY CITY TRAFFIC
85 dB



TRACTOR
105 dB



AMBULANCE
125 dB



FIREWORKS
145 dB



ROCKET LAUNCH
195 dB

Airports – Aesthetics and noise

The design of airport roofs seeks to attract attention, make a statement and connect the building with the history and unique features of its location.

Below are five of the most visually striking airports in the world



CHINA
Beijing Daxing International Airport
Source: Shutterstock



PHILIPPINES
Mactan International Airport
Source: Integrated Design Associates



MADRID
Barajas International Airport
Source: Shutterstock



JORDAN
The Queen Alia International Airport
Source: Louis Berger Group



USA
Louis Armstrong, New Orleans International Airport
Source: Shutterstock

Pick your favourite and let us know why in the comments.

Or start a conversation with us about roof cover board specification.

The acoustic performance of airports, as well as fire and structural performance, is critical.

Learn how to protect your roof design whilst enhancing the building's acoustics, and other critical performance needs, through DensDeck® Roof Board specification.

