

# MADRID-BARAJAS AIRPORT (SPAIN)

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As the largest airport in Spain, Madrid Barajas receives more than 40 million air passengers every year which makes it Europe's main hub for flights to South America. It is also home to the Spanish Air Force. The architecture is impressive, too, and in 2006 Madrid Barajas was awarded the renowned British Stirling Prize.

Spain's capital airport is characterised by the intricacy of its colourful, 1.2 km long Terminal 4 building. Its design placed high architectural demands on the air conditioning and ventilation system. The objective was to create a pleasant atmosphere for passengers, staff and visitors alike by means of a low-turbulence, draught-free air supply.

Passengers should feel safe and comfortable in Terminal 4. Top priorities were, hence, comfort, air quality and safety.

TROX was able to install its air conditioning and ventilation components and systems in nearly all sections of the airport to meet the very diverse requirements.

The displacement flow diffusers had been specially designed for Madrid Barajas and were installed in Terminal 4. Displacement flow diffusers prevent air turbulence and hence draughts. The convection from people and computers, for example, causes the air to rise and create comfortable conditions in the occupied zone. The warm, stale air is extracted near the ceiling. The air quality in the terminal is thus particularly high, with the temperature being maintained at comfortable levels. In addition to displacement flow diffusers TROX also installed fire dampers, sound attenuators and volume flow controllers.