



Choose certainty.
Add value.

Airport infrastructure services

Ensure safety and convenience for airport users.

Your challenges

In the competitive and challenging airport business, airport authorities, developers, operators and equipment manufacturers are faced with changing regulations and industry standards. A wide range of specifications and laws govern all aspects of the airport lifecycle, from construction to operation. Stakeholders require expertise in these regulations and standards to ensure their compliance. To minimise the risk of delay, all stakeholder work in airport construction and operation should be integrated.

What considerations are important in airport construction and operation?

Issues of sustainability such as energy consumption, quality of use, availability, and general operating and administration costs are becoming increasingly important in airport design, construction and operation. You also need reliable systems for safety and security in order to minimise the probability of disturbances and damage. In addition, the convenience and satisfaction

of passengers and airlines depends upon the quality and dependability of infrastructure.

How can we support you?

TÜV SÜD's services help to reduce the risks associated with complex systems in airports. With a broad range of experience pertaining to regulatory compliance and industry standards, our experts are well versed in developing individual solutions for the needs of our airport clients.

We provide impartial and in-depth assessments that help to increase operational availability, boost cost effectiveness and provide legal certainty. Our experts offer comprehensive services for airport safety and security by evaluating risks involved in all technical installations and systems, evaluating all measures to be implemented, and providing recommendations and certification of relevant technical systems. This holistic approach provides you with the confidence and assurance for a safe, profitable venture.



Our airport infrastructure solutions

TÜV SÜD provides end-to-end solutions that address the entire lifecycle of the airport, from planning, construction and acceptance through to operation. Our services cover all buildings and accessible areas equipped with the following infrastructure:

- **Mechanical, electrical and plumbing (MEP) systems**
 - General and emergency power supply
 - Airfield and building lighting systems
 - Signalling systems and airfield marking
 - HVAC systems
 - Radio systems for authorities and organisations with safety tasks
 - Building services automation systems
 - Lightning and surge protection systems
- **Lifts and hoisting machines**
 - Lifts, escalators and moving walkways
 - Passenger boarding bridges
 - Suspended access equipment
 - Cranes and hoisting equipment
 - Power-driven doors and gates
 - Car parking systems
- **Fire and security**
 - Fire safety, and smoke and heat extraction systems
 - Fire extinguishing systems
 - Fire shutters, fire barriers, fire-resistant compartments
 - Area security monitoring systems
 - Fire alarm and CO alarm systems
 - Evacuation concepts, evacuation plans, emergency action plans
 - Safety and escape lighting, emergency power supply
- **Equipment and engineering structures**
 - Tunnels
 - Terminals and towers (including roofing systems)
 - Hangars and equipment
 - Baggage conveyor systems
 - Luggage x-ray machines
 - Airfield refuelling facilities
 - Cathodic corrosion protection
 - Test benches
 - De-icing systems

Our services during planning and design

▪ Tendering support and design review

TÜV SÜD conducts feasibility studies and provides administrative approval and planning management support for airport authorities and developers during the planning stage. We review tender documentation and design plans for the building and its technical installations, and produce FEM and CFD simulations of airport buildings, hangars and equipment.

▪ Risk management

We offer IT security solutions, risk analyses and disaster recovery of information. This includes safety and security assessment of air traffic control systems, air traffic density, air crash frequencies, landing and start frequencies, and renovation and expansion projects.

▪ Environmental and sustainability services

TÜV SÜD provides comprehensive services addressing the sustainability of all aspects of airport infrastructure. We provide expert reports on environmental impact assessments and CO₂ emissions, as well as solutions for meeting environmental legal requirements. Our suite of energy efficiency services includes consulting, energy consumption assessment, energy modelling and simulation.

Our services during construction and completion

Construction monitoring

Our engineering experts provide on-site consultancy during the construction of airports and the fitting of their interior building systems and equipment, including construction monitoring, quality assurance, safety analyses and assessments, and construction site safety.

Technical audit of installed systems

TÜV SÜD performs independent technical audits to ensure the installations comply with design specifications and industry best practices. We review design drawings, provide test parameters, review testing and commissioning documentation, and perform tests and on-site inspections for quality assurance. Our expert reports address design and technical compliance, as well as any identified deficiencies and recommendations.

Testing and inspection of technical installations

We conduct safety analysis and assessment of all mechanical, electrical and plumbing installations, and work with you to optimise the design of all technical

systems. TÜV SÜD also provides services for lab testing, type testing and final acceptance testing of technical installations and components, and lifecycle functional safety assessment. We test several products and equipment in accordance with international directives and standards.

Green building services

Our services cover energy rating certification, as well as facilitation for green building certification based on international sustainability rating systems (e.g. BREEAM and LEED).

Our services during operation and maintenance

Operation and maintenance support

Our experts offer periodic inspection and testing for the effectiveness and operational safety of building services and installation equipment. Beyond conducting health and safety training for your team of airport personnel, we can provide you with a fire safety coordinator and a pollution control officer.

Examples of directives and standards that we test, inspect and certify to:

TESTING AND INSPECTION OF TECHNICAL INSTALLATIONS	
Machinery Directive 2006/42/EC	<ul style="list-style-type: none"> Auxiliary equipment and ground facilities
ATEX 99/92/EC	<ul style="list-style-type: none"> Assembly, installation and operation of equipment in areas with explosive risks
PED 97/23/EC	<ul style="list-style-type: none"> Ground equipment under pressure
95/16/EC; 2006/42/EC EN81; EN115; ASME A17.1 /CSA B44; (et al.)	<ul style="list-style-type: none"> Inspection and certification of lifts, escalators and moving walkways
EN ISO 717-1 Directive 2002/49/EC DM 31/10/1997	<ul style="list-style-type: none"> Noise insulation measurement and evaluation
EN 13816	<ul style="list-style-type: none"> Passenger transport service quality

MANAGEMENT SYSTEMS CERTIFICATION	
ISO 9001, AS/EN 9100, 9110, 9120	<ul style="list-style-type: none"> Quality management
ISO 14001	<ul style="list-style-type: none"> Environmental management
EMAR EEC 1836/93	<ul style="list-style-type: none"> Eco-management and audit
ISO 50001	<ul style="list-style-type: none"> Energy management
ISO 27001	<ul style="list-style-type: none"> Information security management
ISO/IEC 20000	<ul style="list-style-type: none"> IT service management
OHSAS 18001	<ul style="list-style-type: none"> Occupational health and safety management
SCC / BS 8800	<ul style="list-style-type: none"> Safety management
HSSE	<ul style="list-style-type: none"> Health, safety, security and the environment management
SYSTEMS EVALUATION FOR LBA/EASA CERTIFICATION	
EU OPS / EASA	<ul style="list-style-type: none"> Systems for operation of commercial air transport
JAR-FCL / EASA	<ul style="list-style-type: none"> Systems for flight schools
JAR-145 / EASA	<ul style="list-style-type: none"> Systems for technical aviation companies



■ Certification and validation

TÜV SÜD is accredited to certify your airport operations to several international management systems and provide systems evaluation for LBA (Luftfahrt-Bundesamt) and EASA (European Aviation Safety Agency) certification.

Your business benefits

- **Gain assurance of airport security** – by avoiding disturbances and damage, thereby maintaining your airport’s reputation for safety and security.
- **Ensure systems availability and quality** – with our expertise in early recognition of weak spots. By avoiding faults and breakdowns, you contribute to satisfied passengers and airlines, and good public opinion.
- **Avoid legal risks** – through our in-depth knowledge of technical directives, rules and regulations, and standards.
- **Improve cost effectiveness** – by using our engineers’ customised solutions for increased efficiency and cost savings.
- **Reduce your administration costs** – by using eDocX, our innovative web-based logbook to store electronic test certificates, thereby meeting legal compliance for documentation and providing ease of access.

Why choose TÜV SÜD?

TÜV SÜD is a trusted, independent third-party solutions provider for your airport infrastructure. The strong reputation of the TÜV SÜD brand ensures that our reports and certificates meet with a high level of acceptance around the world.

Our experts are actively involved in the development of many European and international standards, making them completely familiar with state-of-the-art technology and statutory regulations. We have long-standing experience with airport infrastructure, having been engaged on a number of high-profile projects at airports in Germany, Switzerland, Italy, the United Arab Emirates, Georgia, South Africa and India. Our industry expertise keeps us up to speed with the latest developments in international regulations and standards.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East, Asia and Africa. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- Civil and structural engineering services
- Mechanical, electrical and plumbing (MEP) services
- Lift and escalator services