



BOSCH

Invented for life



Solutions for
airport facilities

[bosch.com/airports](https://www.bosch.com/airports)

Safe. Smart. Efficient.



Bosch solutions for airport facilities



When you choose Bosch as a supplier of products and solutions for airport facilities, you can be assured of cutting-edge technologies from a global provider. True to our company slogan "Invented for life", our products and solutions are designed with our customers in mind. As a leading global supplier of technology and services, Bosch understands that professionals need to be able to rely on their industry partners for technical expertise and innovative thinking.

Bosch provides a comprehensive range of products and solutions for airport facilities across the world, has a choice of products that are commonplace across the industry requirements, whether it is energy-efficient heating and hot-water systems, building and parking solutions or a comprehensive security system.

All solutions for airport facilities

SAFETY & SECURITY



6 Security and life safety



7 Fire alarm and voice evacuation



8 Video systems



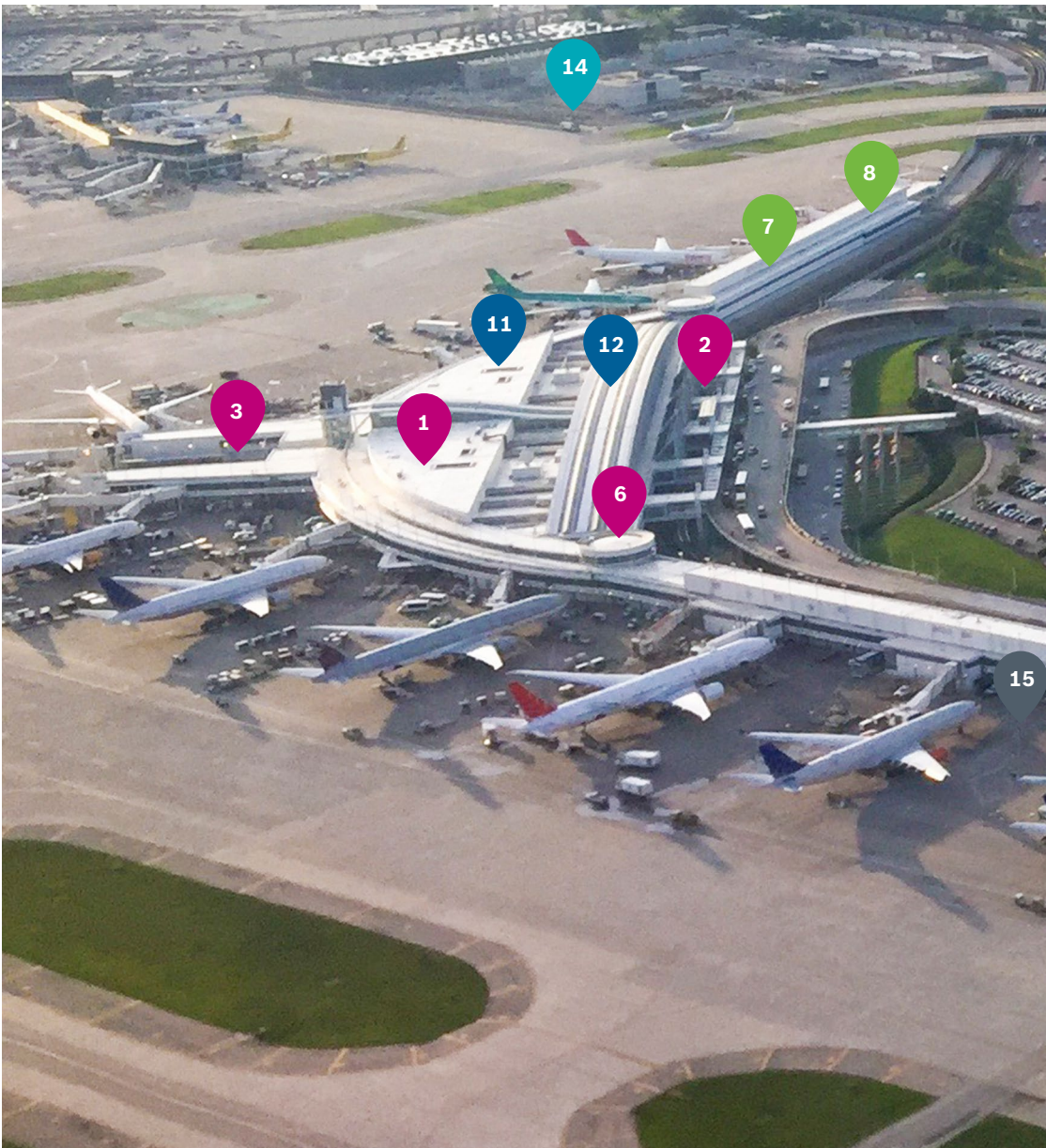
9 Intrusion alarm systems



10 Access control systems



11 Management software



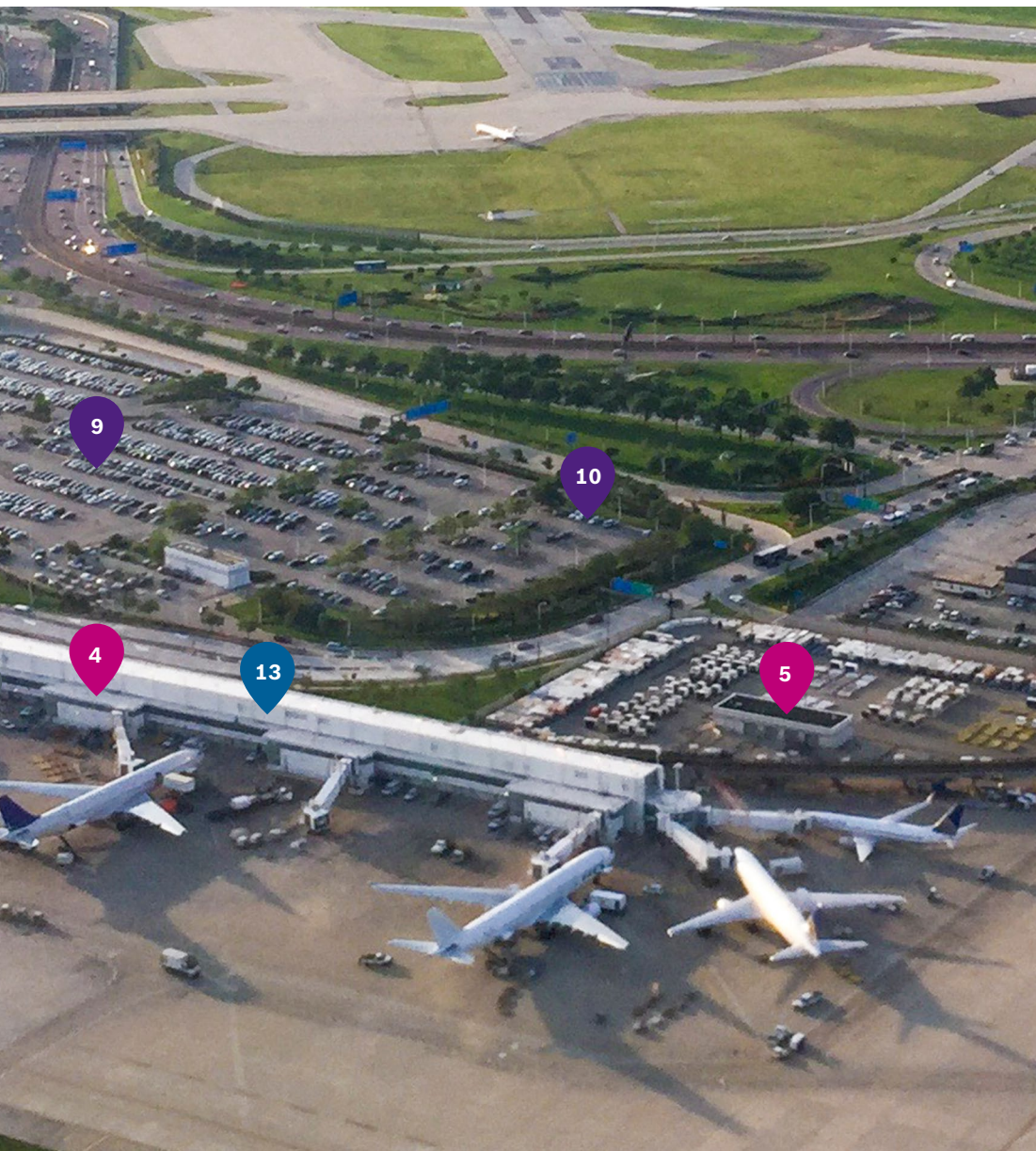
ENERGY



12 Energy services



13 Energy-efficient heating



BUILDING MANAGEMENT



11
16 Energy and building solutions



12
17 Conferencing and discussion



13
18 Professional power tools

FLEET MANAGEMENT



14
19 Maintenance and repair of vehicles

PARKING



9
14 Automated valet parking



10
15 Community-based parking

TRANSPORTATION



15
20 Electrified drive systems

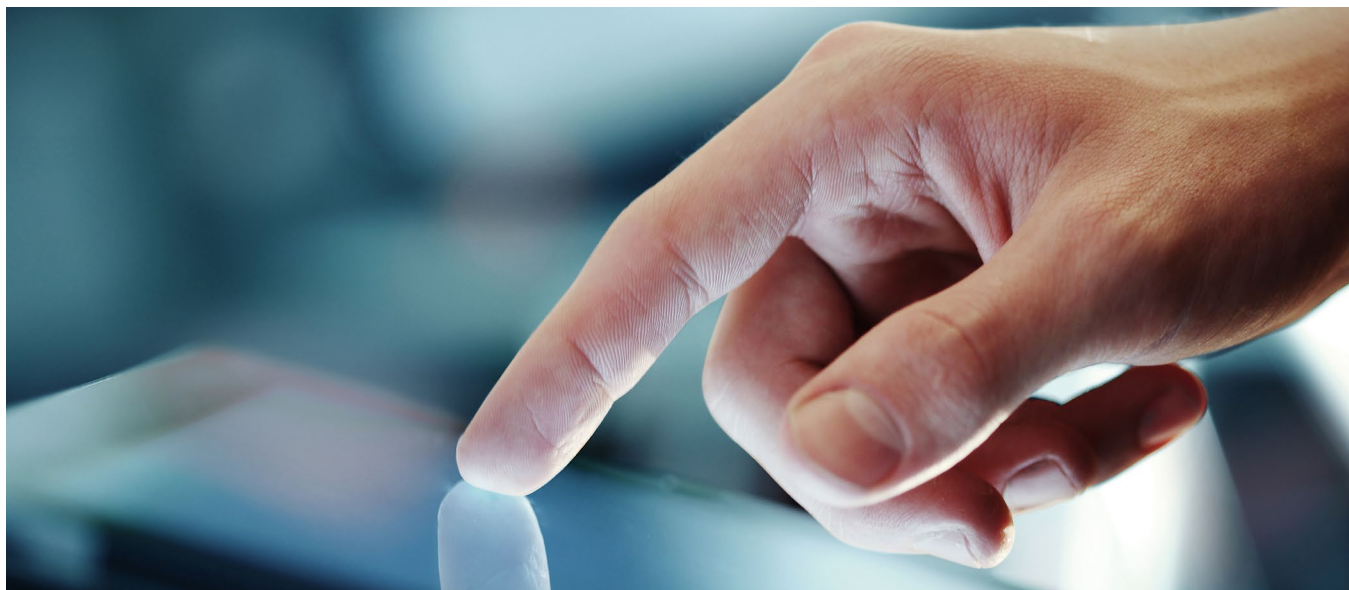
Security and life safety

The safety requirements for infrastructures and buildings are increasing worldwide. The goal: People and values are protected as much as possible. Trust the Bosch long-standing expertise in consulting, planning, implementing and operating your individual security and life safety solution.

Benefits

- + Minimize risks, maximize security: no matter what your security task looks like, Bosch offers the best solution for every building.
- + Bosch offers comprehensive services and consultancy for monitoring, maintenance, modernization, and operation as well as attractive and flexible rental and operator models.
- + Bosch assists in all project phases and finds therefore the best solution for you: Planning, realization and operation complement each other perfectly, creating maximum security.

Bosch implements special requirements for a safe, economic, and comfortable building and offers a broad spectrum of services for it: from video surveillance, access control, fire-, evacuation-, and speech-alarm systems, robbery and break-in notification systems via networked time and building management systems, up to energy solutions. As an installer, service provider and consultant, Bosch supports in multifaceted challenges and provides customers with networked and intelligent overall solutions for safety and security from a single source. The Bosch experts have specific industry expertise and create individual solutions with future-oriented products and services that always focuses on the customers needs and requirements.



Fire alarm and voice evacuation systems

The Bosch portfolio covers the most reliable systems that include fire sensors, voice evacuation and control software to quickly locate, detect, verify and to contain fires. The systems are comprehensive, tailor-made solutions for almost any project. They fulfill and even exceed aesthetic standards and market requirements.

In order to protect lives and property at airports, it is vital to quickly detect, locate, verify, and contain fires. Terminal halls pose special challenges, with due to crowds and long distances to emergency escape routes. The Bosch systems can quickly and accurately locate a fire and trigger immediate evacuation. At the same time, advanced technology minimizes false alarms. The public address system allows the operator to guide people to safety and avoid danger areas. Surveillance cameras can monitor evacuation proceedings and help the authorities coordinate rescue operations. All these systems incorporate high levels of redundancy and can be integrated centrally using the Bosch building integration system to ensure seamless operation under any situation.

Benefits

- + Superior fire protection with intelligent solutions
- + Advanced public address and voice evacuation systems
- + Solutions range from simple installations to highly complex applications



Video systems

With perimeters, parking structures, terminals, aprons, airfields, shops and restaurants, airports are complex environments with each zone facing its own particular set of surveillance challenges. Solutions need to be tailored to a multitude of security risks, including bomb threats, sabotage and hijacking of aircraft, as well as commercial risks such as theft, vandalism and harassment.



With the video security portfolio, Bosch offers a wide variety of both fixed and moving cameras, different form factors and excellent image quality. The portfolio goes the extra mile as they have built-in video analytics at the edge as standard as of the IP 4000 series. This ensures that operators are alerted when needed and allows you to quickly retrieve correct data. Additionally, built-in analytics help to enforce safety and health regulations by notifying you when an emergency exit is blocked, for example. For perimeter protection, Bosch offers extreme solutions such as the MIC IP camera family and the thermal solutions, to make sure a person or object is detected as soon as it enters a prohibited area. Airports often have large areas that need to be monitored, which is not a challenge for the 4K ultra HD solutions.

Benefits

- + Video analytics built-in as standard as of the IP 4000 cameras
- + Reduce bitrate up to 80% and save storage costs without compromising video quality
- + Integrated hardware and software measures to keep video data secure, such as a built in trusted platform module

boschsecurity.com

Solution provided by: Bosch Building Technologies

Intrusion alarm systems

From single applications to extensive projects, Bosch provides solutions that are fully integrated and meet the highest security standards. The Bosch detectors and panels offer a finely-tuned balance between quick response to real security breaches and ignoring costly false alarm triggers.



Passengers with luggage can tempt thieves, and stores are vulnerable to shoplifters. There is also a risk of after-hours burglaries, with valuables, equipment, cargo, or personal items being stolen from restricted areas such as shops, luggage conveying systems and cargo handling zones. Bosch can help dealing with this as well, for example with intrusion systems to monitor all doors, vehicle entrances and perimeters for unauthorized and suspicious persons and stolen vehicles. If a detector picks up a possible threat, the Bosch video management system, equipped with high-resolution CCTV cameras and intelligent video analysis, comes into play to verify the alarm and enable subsequent forensic searches to identify and apprehend thieves.

Benefits

- + Portfolio covers panels, detectors, communicators and accessories
- + Scalable intrusion solutions for various needs
- + Reliable intrusion detection with decades of experience

boschsecurity.com

Solution provided by: Bosch Building Technologies

Access control systems

Flexible access control systems allow workers to get on with their jobs, while protecting staff from uninvited guests and businesses from property and information theft. Bosch offers integrated systems for many different applications.



Benefits

- + Complete Bosch access control solution covering software, controllers and a variety of readers and credentials
- + Comprehensive system with many features and possible integration with third-party devices
- + Easy to install and maintain thanks to its modular concept

The IP-based access control system is ideal for keeping unauthorized individuals from entering gates and restricted areas such as airfields and aprons. It supports a large range of readers and integration with video surveillance makes it possible to capture and record access events. Access violations automatically trigger an alarm.

Management software

Bosch management software is specialized in complex enterprise solutions. The management software portfolio covers video and alarm management such as the building integration system or the Bosch video management system. The Bosch building integration system offers a tool box to allow integration with third party applications via open standards (OPC, ONVIF, OSDP) and software development kits.



The building integration system provides a single web-based control point for monitoring all security, safety, and facility management systems. This includes alarm management, fast alarm identification via location maps and follow-up procedures. It seamlessly integrates fire and intrusion alarms, evacuation, access control, video surveillance and building automation systems into a single platform. The building integration system enables a single operator to monitor and control all security systems, as well as to respond faster to emergencies and achieve greater overall effectiveness. The Bosch video management system provides seamless management of digital video, audio and data across an IP network.

Benefits

- + Seamless integration of all Bosch safety and security subsystems as well as third party applications via SDK and open interfaces
- + Easy to operate, increasing operator efficiency, and allowing for a faster emergency response
- + One complete solution to enhance security, including a fully embedded access control

boschsecurity.com

Solution provided by: Bosch Building Technologies

Energy services

Global energy consumption is continuously increasing and buildings are the number one consumer of energy. Bosch's energy services contribute to enhance energy efficiency, saving operating costs and reducing the carbon footprint.

With a combination of customized system solutions, services and modern technology, Bosch provides a comprehensive portfolio on energy services. All measures are always perfectly matched in order to save energy and operating costs. The Bosch range of services comprises energy analysis, planning and implementation of supply solutions and efficient long-term operation of energy systems.

Benefits

- + Increasing energy efficiency, reducing operating costs – Bosch develops tailor-made and future-proof energy solutions for buildings.
- + An attractive business model ensures that Bosch is a reliable long-term energy partner.
- + Bosch assists in all project phases and can therefore find the best solution for the customer: Analysis, planning, installation and operation complement each other perfectly, creating maximum efficiency.



Energy-efficient heating, domestic hot water solutions and cogeneration

Bosch's modular and comprehensive product portfolio provides the optimum solution meeting the specific requirements of each building – no matter if medium sized or large airport. Key benefits of Bosch systems are outstanding efficiency, reliability and innovative control systems.

Benefits

- + Maximum reliability of heating and hot water supply by using different energy sources. Integration of renewable energies for a carbon footprint that sets an example in ecological terms.
- + Intelligent controls balance the different energy sources in the most cost and energy effective way. Secure remote access allows the personnel to monitor the plant anywhere and anytime to make use of the remote support of a Bosch service engineer if required.
- + Bosch's modular product portfolio enables quick installation, low cost of ownership and high reliability. Experienced Bosch experts support along the whole product life cycle – from planning, to commissioning to 24/7 support and remote connectivity.

Modern building complexes comprehend decentral power generation with CHP's. This can save up to 76% on electricity bills and reduces the building's carbon footprint significantly. CHP isolated solutions provide electricity also during power blackouts, e.g. for critical systems, servers, lighting, and ventilation. Surplus heat from the cogeneration is used for heating and domestic hot water. Efficient heating boilers cover peak loads with up to 110% efficiency and are supported by solar thermal systems.



Automated valet parking

As a pioneer of automated mobility, Bosch has developed a driverless system that employs connected technology to save drivers not just the wearisome search for a parking space, but also the parking maneuver itself. Thanks to automated valet parking, every experience begins more convenient – whether it's flying off on holiday or going to a concert. Therefore, the driver simply drops off the vehicle at the drop-off area. Then the vehicle will be navigated to a free parking space with the help of the intelligent sensor technology.



Benefits

- + Automated valet parking offers the car driver comfort and saving of time, as the vehicle takes over the driverless parking maneuver itself. Meanwhile, the driver can already proceed to his destination. Getting in and out of the vehicles takes place in comfortable and safe transfer areas. In addition, precise automated guidance eliminates the risk of incidents and damages while parking.
- + Automated valet parking increases efficiency due to the optimization of the parking garage capacity. The premium service opens up a range of additional potential service offerings, like a car wash, which excites the customers. The infrastructure based approach allows mixed traffic in the parking garage.

Automated valet parking is made possible by combining the intelligent sensor system supplied by Bosch with the automotive technology. The sensors, guiding the vehicle, are installed in the parking garage monitor, the driving corridor and its surroundings. Hereby, Bosch provides the system for both the parking provider and the car manufacturer.

The usage of the intelligent parking garage sensor systems automated driving. The intelligent infrastructure allows mixed traffic of automated and manual driving vehicles and passengers in the parking garage, hence, allowing an incremental implementation of automated valet parking vehicles.



[bosch-mobility-solutions.com](https://www.bosch-mobility-solutions.com)

Solution provided by: Connected Mobility Solutions

Community-based parking

With community-based parking Bosch simplifies the search for free parking spaces in the cities. Thereby, car drivers will be navigated straight to the next free parking space. This happens with the help of the ultrasonic parking sensors of the cars which detect free parking spaces on the street. The received information will be processed in the cloud and provided to drivers seeking a parking space.

Community-based parking includes drivers actively seeking a parking space, as well as those who are simply making their way around the city. The transmitter vehicle identifies empty parking spaces on the street as it drives past them. This data is anonymized and sent to the cloud. There, it is collected, aggregated, and processed further into digital parking maps. Based on the processed data, the receiving vehicle is given precise information on where free parking spaces are. The required connectivity hardware and the ultrasonic parking sensors of the car are already widely spread and facilitate a realization of community-based parking based on the latest technology.



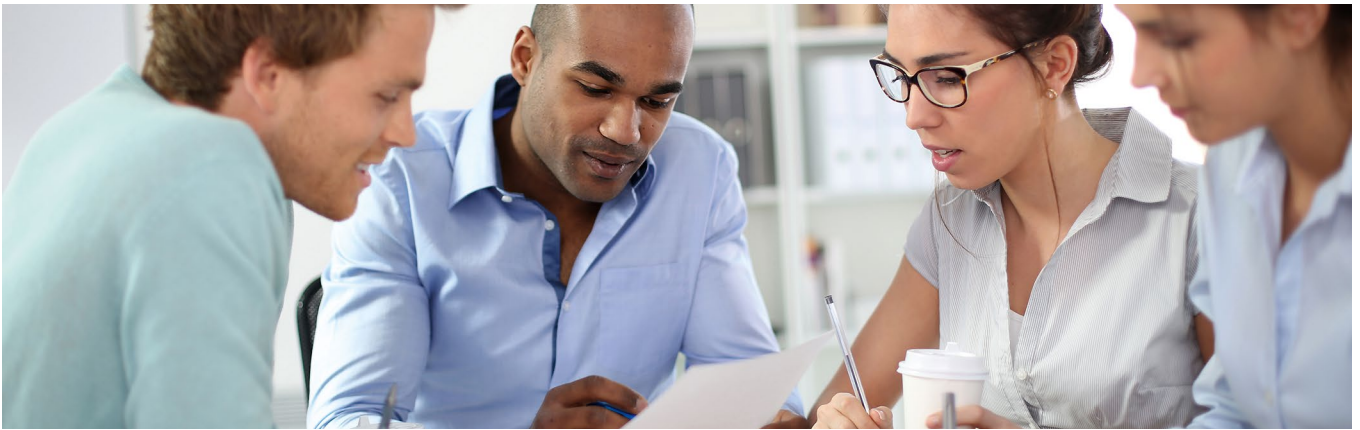
Benefits

- + Thanks to community-based parking the traffic of searching for parking spaces decreases significantly. In addition, the environment benefits from the direct and shorter drive to a free parking space.
- + Community-based parking enables car drivers to drive directly and relaxed to a free parking space. Thereby, the drivers save time. Furthermore, the on-board instruments indicate specific parking spaces (e.g. E-charging stations or disabled parking spaces).



Energy and building solutions

As a reliable partner, Bosch provides connected and integrated solutions which make buildings safer, more comfortable and more efficient. The Bosch experts support as consultants, installers and service providers. They have an extensive expertise and integrated solutions based on the latest technologies. Bosch offers integrated solutions for building security, building automation and energy services. All of Bosch's services are provided from a single source: from consulting and planning across implementation to operation. This enables Bosch to comprehensively meet the customers' needs. Bosch is active at more than 60 locations in Europe, the U.S. and Asia Pacific, and more than 100,000 customers benefit from experts' know-how.



Benefits

- + Due to Bosch's long-standing competence, buildings will be made fit for the future with a targeted approach and experienced staff.
- + Short distances, competent teams and local contacts ensure professional consultation, optimal project implementation and long-term on-site support.
- + Bosch offers integrated overall solutions and attractive financing and operating models, are optimally tailored to every individual requirement.

Scarce resources, climate change, urbanization, demographic shifts, digitalization, and demands for greater quality of life – the mega-issues of our time require major changes in the infrastructures and commercial buildings. The need for security, efficiency, and comfort is rising, as well as the demand for connected overall solutions. The Internet of Things is opening up many new possibilities and opportunities. Connectivity is bringing scores of new developments! One of it is that key areas of building services will be closely interconnected in the future. Leveraging and applying all the synergies in a sustainable way requires an integrated approach and course of action. Bosch has the essential areas of expertise needed to integrate all key aspects into a single solution. Bosch is focused on a clear vision – to be the number-one choice for the technologies and services that make buildings more secure, more comfortable and more efficient.

[boschbuildingsolutions.com](https://www.boschbuildingsolutions.com)

Solution provided by: Bosch Building Technologies

Conference and discussion

The flagship digital congress network system enables the smooth conduct of even the most demanding meetings. Bosch offers award-winning, innovative industrial designs and state-of-the-art features, tailored for meetings of any size.



The Bosch system ensures a fast and flexible set-up with a choice of wired and wireless configurations. IR transmitters ensure that simultaneous interpretation is distributed solely to the participants for whom it is intended.

Benefits

- + High speech intelligibility and natural sound
- + Full meeting control functionality
- + Enhanced security and reliability

boschbuildingsolutions.com
Solution provided by: Bosch Building Technologies

Professional power tools for trade and industry

A craftsman puts his heart and soul into his projects. Expectations are high: client requirements, appointments and construction challenges. That's what drives a professional to maintain high standards, deliver the best possible result and work with uncompromising efficiency. For that, skills and robust tools are needed. Bosch Professional offers the best support with innovative technologies and smart solutions. From planning and organizing to successful completion, Bosch provides an intelligent range of products and services with the quality to rely on.

Bosch professional power tools are engineered for excellence, meeting the highest standards in speed, precision and robustness for consistent, professional results. Therefore, Bosch Professional Power Tools is a competent partner for all craftsmen.



As one of the world's leading manufacturers of power tools and accessories, Bosch offers professionals virtually every tool they could ever need, from state-of-the-art lithium-ion cordless (battery-powered) to class-leading corded products. Bosch Professional Power Tools focuses on providing the trust a craftsman relies on when it comes to his tools and accessories.

Bosch power tools is consistently expanding its expertise in connected measuring and power tools for professionals: from 2017 onwards the new tools are available for trades-people, from laser measures with integrated Bluetooth modules to angle grinders, lights and drill drivers.

With these tools, Bosch is driving the trend of digitization and is offering professionals a system, from products to inventory management, that optimizes processes and enables all tradespeople to work more efficient.

Benefits

- + Bosch provides services and consulting for all professional power tools and measuring tools beyond the legal warranty period. From online information to a dedicated team of trained customer service personnel.
- + Bosch ensures an excellent availability of spare parts and a fast turnaround time for warranty and chargeable repairs.

bosch-professional.com

Solution provided by: Bosch Power Tools

Solutions for maintenance and repair of vehicles: spare parts, diagnostics and workshop services

In commercial operations such as airports, reliability is essential. Every breakdown or unplanned repair leads to downtime and costs. For this reason, Bosch is constantly expanding its product range. In addition to spare parts and workshop services from a single source, Bosch offers customers a complete range of diagnostic and repair shop equipment.



Benefits

- + System competence and know-how
- + Service for all commercial, off road and agricultural vehicles
- + Parts, diagnostics and workshop services from a single source

The wide range of high-quality Bosch products are suitable for passenger cars, commercial vehicles, construction equipment and special-purpose vehicles such as those used in airports. In all types of vehicles, technical systems are becoming increasingly diverse and complex. Bosch make the daily lives easier by providing a wide range of testing and repair-shop technology, diagnostic software, service training and information services.

More than 16,000 Bosch Car Service partners worldwide provide vehicle owners with technically advanced and cost-effective workshop services – from bumper to bumper for passenger cars and LCV. With their extensive expertise and specialized workshop equipment, Bosch Diesel Centers and Bosch Diesel Services offer diagnosis, components testing, and repairs for even the latest diesel systems, components and vehicles. Moreover, they are the only authorized partners for processing warranty claims for Bosch diesel components. With parts, diagnostics, and workshop services from one single source, Bosch is uniquely positioned to put its experience and expertise to work for airports.



[bosch-automotive-aftermarket.com](https://www.bosch-automotive-aftermarket.com)

Solution provided by: Bosch Automotive Aftermarket

Electrified drive systems

More driving than flying goes on at airports. Baggage tow tractors must be completely free of emissions when operating inside the terminals, but still transport passengers' luggage and cargo reliably and quickly between the aircraft and the airport buildings.

Bosch's electric drive consists of three coordinated components: the electrical motor, the inverter and the transmission system. Developed for the mass production of cars, the inverter and electric motor are not based on an industrial design, instead they are designed and tested for mobile operation under an expanded range of environmental influences.












In addition to the advantages of their compact design and low weight, the components are optimized to have a high power density. Due to the high level of product maturity, the system is easy to use right away.

Benefits

- + No emissions: the all-electric drive solutions provide emissions-free local operation and hybrid drive systems also reduce emissions as well as the amount of CO₂ output
- + 100% maintenance free
- + Compact: The space-saving design can easily be fitted into existing mechanical and hydraulic systems



Bosch divisions for selected verticals

	Airport facilities 	Automotive industry 	Commercial buildings 	Entertainment facilities 	Food and confectionery industry 	Hotel facilities 	Mining 	Pharmaceutical industry 	Railways and train station facilities 	Residential buildings 	Theaters 
PROVIDER											
Building Technologies	■	■	■	■	■	■	■	■	■		■
Thermotechnology	■	■	■	■	■	■	■	■	■	■	■
Power Tools	■	■	■	■	■	■	■	■	■	■	■
Household Appliances										■	
Service Solutions		■	■		■			■	■	■	
Connected Mobility	■	■	■	■		■			■	■	■
Rexroth		■	■	■	■		■	■	■		■
Automotive Aftermarket	■	■					■		■		
Packaging Technology					■			■			
Smart Home										■	
Software Innovations			■							■	
Bosch Engineering	■	■					■		■		
Integrated Solutions							■				





The Bosch Group

The Bosch Group is a leading global supplier of technology and services. Its operations are divided into four business sectors: Mobility solutions, industrial technology, consumer goods, and energy and building technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected manufacturing. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life". The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiaries and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 120 locations across the globe, Bosch employs a huge number of associates in research and development.

The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as "Workshop for Precision Mechanics and Electrical Engineering". The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant up-front investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

More information is available online at
www.bosch.com
www.bosch-press.com

Robert Bosch GmbH

Phone +49 711 400 40990

bosch.com

© April 2018

Technical data subject to modification without notice.

Printed in Germany. Any color variations are due to the limitations of the printing process.

Printed on 100% chlorine-free bleached cellulose manufactured in an environmentally friendly process.