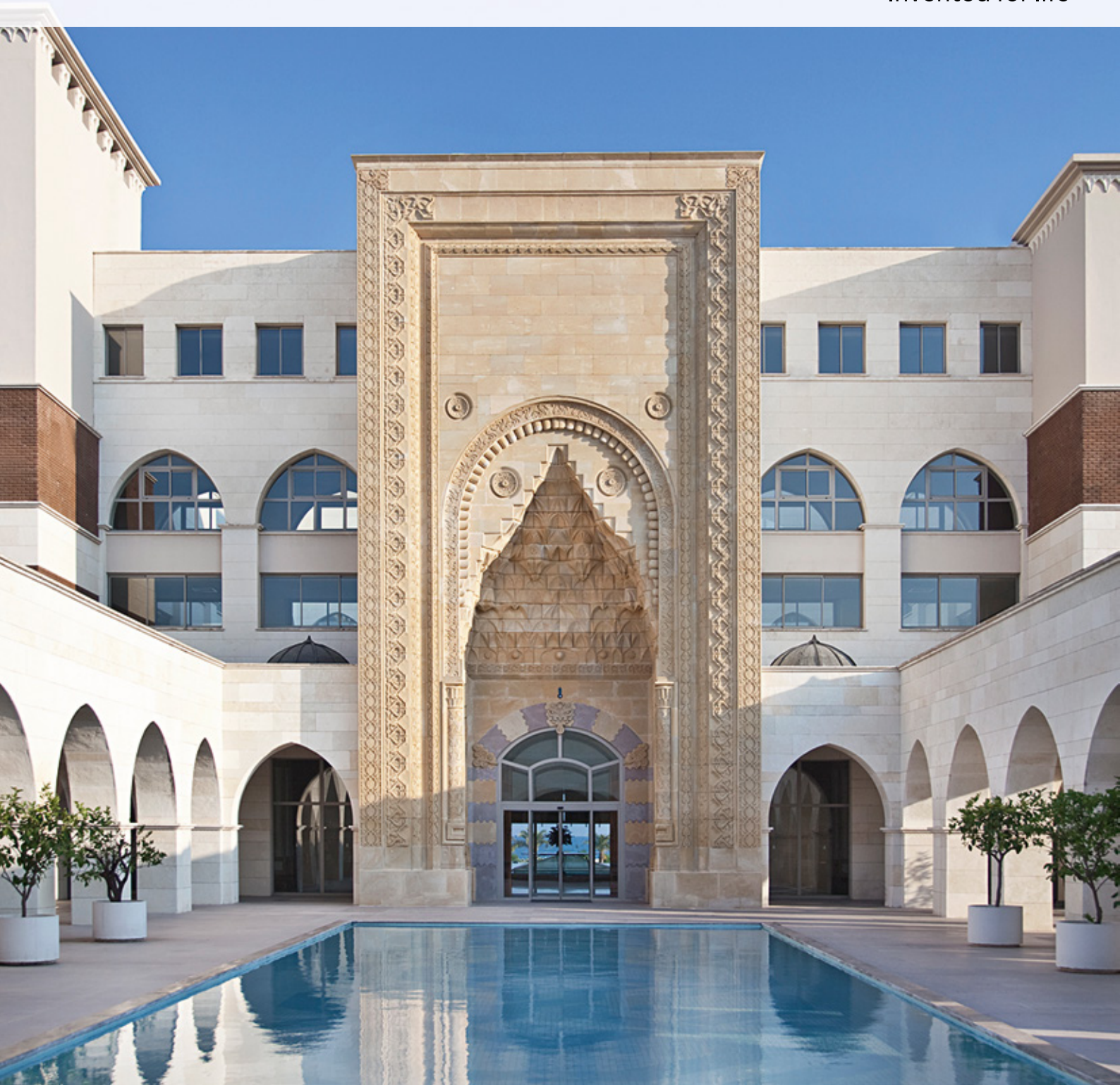


# **Bosch:** solutions for hotel facilities



**BOSCH**

Invented for life



# Cutting-edge technologies from a global provider

All hotel facilities have to meet especially demanding security, safety, communication, HVAC, and energy criteria.



When you choose Bosch as a supplier of products and solutions for hotels, 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.

## The Bosch Group at a glance

The Bosch Group is a leading global supplier of technology and services. It employs roughly 360,000 associates worldwide (as per April 1, 2015). The company generated sales of 49 billion euros in 2014.\* Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including its sales and service partners, Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth.

In 2014, Bosch applied for some 4,600 patents worldwide. The Bosch Group’s strategic objective is to create solutions 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 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

\*The sales figure disclosed for 2014 does not include the former joint ventures BSH Bosch und Siemens Hausgeräte GmbH (now BSH Hausgeräte GmbH) and ZF Lenksysteme GmbH (now Robert Bosch Automotive Steering GmbH), which have since been taken over completely.





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](http://www.bosch.com) and [www.bosch-press.com](http://www.bosch-press.com).

### **A leading global supplier of technology and solutions**

Bosch provides a comprehensive range of products and solutions for the hotel industry to hotel owners, planners, and contractors across the world. Bosch has a choice of products that are commonplace across hotel projects, whether the project requires energy-efficient heating and hot-water systems from

respected brands, innovative and intuitive video-surveillance systems, or the hard-wearing power tools needed for professional installation work.

### **Bosch products and solutions**

Bosch offers a wide range of products and solutions to effectively manage hotel operations.

- ▶ All areas and activities can be efficiently monitored, allowing emergencies, fires, and threats to be detected immediately
- ▶ The hotel site can be evacuated fast, and in a controlled manner
- ▶ All safety, security, and communications solutions can be integrated in one facility management system
- ▶ Intelligent energy system control for increased reliability and reduction of energy costs
- ▶ Efficient energy generation systems for heating, process heat, and electric power



# Full circle with Bosch solutions

1. Solar thermal heating, hot water, and electricity



2. Professional power tools



3. Energy and building solutions



4. Ventilation and air-conditioning



5. Professional sound systems

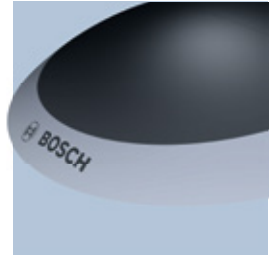


6. Access control systems





**12. Connected parking solutions**



**11. Intrusion alarm systems**



**10. Public address, fire alarm, and voice evacuation systems**



**7. Video surveillance systems**



**8. Building management system**



**9. Conference systems**





# Professional power tools

## For trade and industry

Bosch professional power tools are engineered for excellence, meeting the highest standards in speed, precision, and robustness for consistent, professional work results. Bosch has a long history of making high-quality accessories for a wide range of applications. So whatever the job, you can rely on Bosch original accessories.





As one of the world's leading manufacturers of power tools and accessories, Bosch offers professional tradespeople practically every tool they could ever need, from state-of-the-art lithium-ion cordless (battery-powered) to class-leading corded (mains powered) products.

Construction industry professionals have come to expect the Bosch brand to deliver continuous innovation, high manufacturing standards, and high performance, not to mention reliable support services.

#### **Definite advantages for professionals**

As Bosch knows how important it is for professionals to be able to rely on their tools, we offer services for all professional power tools and measuring tools beyond the legal warranty period.

#### **After-sales service**

Bosch offers top-quality after-sales services, from online information to a dedicated team of trained customer

service personnel. Our partners' authorized service centers ensure excellent availability of spare parts and a fast turnaround time for both warranty and chargeable repairs.

#### **For professionals, from professionals**

Bosch understands that a lot is expected of construction industry professionals: speed, reliability, competence, mobility and endurance. We believe it is only fair that they should demand the same of their power tools. When developing new power tools, Bosch works very closely with tradespeople who use power tools as part of their everyday work.

Bosch professional power tools are tested in extreme work environments, under the harshest conditions, be it on an oil rig, inside a mountain tunnel, or in a hotel. A power tool which passes our exhaustive tests is guaranteed to reliably fulfill the highest expectations. Bosch tools really are for professionals, from professionals.

Designed and built for challenging projects: Customized HVAC solutions for hotel facilities. Our modular product portfolio enables quick installation, low cost of ownership, and high reliability. Our experts support along the whole product life cycle – from planning to commissioning to 24/7 support and remote connectivity.



## HVAC, process heat, and electricity

### Partner for efficient solutions

The planning and provision of energy solutions for hotels presents particular challenges for all parties involved. Attuned system components ensure quick installation, reliable functionality, and high efficiency.

All our projects are planned using an integrated, systematic approach – our way to guarantee that the thermal systems are energy-efficient and successfully completed in time. Thanks to our modular and extremely comprehensive product portfolio, we can find the optimum solution to meet the precise requirements of each building complex. Here, we can draw on over 150 years of experience, as well as the extensive professional expertise of our associates. More than 110,000 successful projects in more than 140 countries are evidence of our competence.

We offer a broad portfolio that covers nearly all solutions from electricity to heating and process heat up to cooling and ventilation:

- ▶ Hot-water and heating boiler systems
- ▶ Combined heat and power plants
- ▶ Steam boiler systems
- ▶ Waste heat recovery systems
- ▶ Heat pumps, also with waste heat recovery
- ▶ Buffer and hot-water tanks, energy storage systems
- ▶ Air handling units, water- and refrigerant-based cooling systems
- ▶ Large solar thermal solutions
- ▶ All systems and system combinations with a complete range of intelligent controls, remote services, accessories, and services
- ▶ Ventilation and air-conditioning



### Using the sun for heating and hot water

Solar thermal systems can deliver reliable heating and hot water for the whole hotel complex. Buffer tanks decouple the heat loading and unloading processes, enabling the use of solar thermal heat also during the night. Efficient heating boilers cover peak loads with up to 110% efficiency.

### Highly efficient cogeneration of heat and power

Decentralized power generation can save up to 76% on electricity bills. Island solutions provide electricity also during power blackouts, e.g. for critical systems, servers, lighting, and ventilation. Very tall buildings use steam to distribute heat to all floors efficiently. A 4-pass boiler enables waste heat to be recovered from the exhaust gas of a CHP to generate steam.

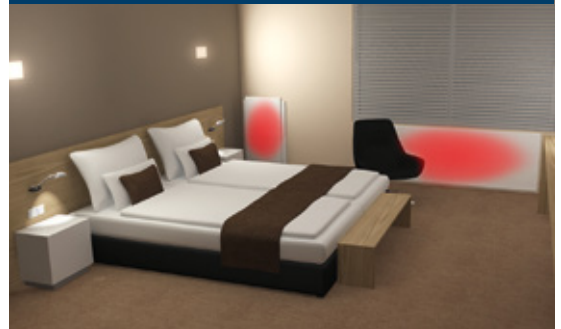
### Global service

Bosch provides worldwide service for all customers to guarantee the success of their projects. From in-depth consultation to 24/7 service and remote support – the international service network of Bosch and its partners is always available and provides support quickly. On request our experts analyze further efficiency potential and advise on retrofit measures that increase cost efficiency.

#### Hot-water solutions



#### Heating solutions



#### Reliable energy supply



#### Reliable competence in every phase

From small- to large-scale projects, the most important factor is optimum harmonization of all technologies employed. We provide professional support in every phase of energy supply for our clients from the hotel sector – from initial advice to comprehensive services that guarantee sustainably efficient and safe operation of the installed system. Bosch Thermotechnology is committed to ensuring that our solutions live up to their promise.

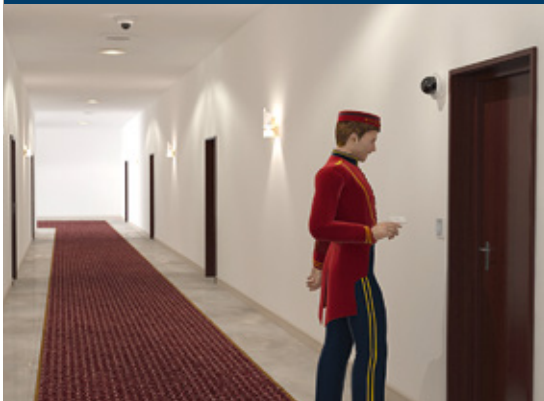
# Security systems

## Safety and reliability for the future

Efficiently managing and coordinating all the safety, security, communication, and building-automation systems that can be installed in a world-class hospitality establishment presents a tough challenge. The Bosch building integration system (BIS) 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, CCTV, and building-automation systems into a single platform. Using the BIS, a single operator can monitor and control all security systems. The BIS also allows faster responses to emergencies and greater overall effectiveness.



**Access control systems**



**Fire alarm and voice evacuation systems**



For security and safety, as well as for communications products, solutions, and services, Bosch Energy and Building Solutions is the perfect partner.

They are specialized in safety and security and have the capacity to offer integrated systems tailored to the specific requirements of each application.

### **Maximize security from the start**

Precisely because hoteliers are unable to impose intrusive security measures such as full screening and identity checks at their entrances, hotels are a prime “soft” target for robberies and hostile acts. Maintaining an open and inviting atmosphere in the public areas, especially the lobby, is important for all hotels, yet these areas constitute the first line of defense for hotel guests.

Bosch provides a portfolio of reliable video surveillance products that allow you to keep a welcoming and pleasant atmosphere in your hotel. High-resolution pan-tilt-zoom AutoDome cameras provide security with a light touch, missing no detail while remaining unobtrusive. Specialized low-light Dinion cameras equipped with Bosch’s cutting-edge intelligent video analysis (IVA) allow you to quickly identify potential hazards in the reception area and entrance driveway.



### Clamp down on fires and facilitate evacuations

The hotel room is the inner sanctuary for the traveler – many jurisdictions have moved to make guest safety and hazard identification a legal obligation for hotels. Bosch systems quickly and accurately locate a fire and trigger evacuation while minimizing the occurrence of false alarms. The public address and background music system doubles up as a multi-zone voice evacuation system, allowing the operator to guide guests and employees to safety while avoiding danger areas. Surveillance cameras, usually deployed to ensure the security of guests, can monitor evacuation proceedings and help the authorities coordinate rescue operations. All these systems have high levels of redundancy and can be integrated centrally using the building integration system to ensure seamless operation under any contingency.

### Make your hotel a top meeting point

Hotels are ideal venues for important events. Many leading hotels turn to Bosch for the equipment they need to host such events.

The flagship digital congress network system enables the smooth conduct of even the most demanding meetings. The 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. All events (conferences, celebrations, weddings) can rely on professional sound systems from Electro-Voice or Dynacord.

### Detect suspicious activities

Outdoor facilities such as car parks, gardens, and pools play an important role in making the hotel stay as pleasant as possible for guests.

Surveillance cameras act as unblinking eyes with unquestionable loyalty, securing the hotel perimeter and facilities while preserving the esthetic appearance of the hotel. Bosch public address systems ensure that warnings of potential hazards reach every corner of your property, protecting guests from harm and hoteliers from potential liability claims.

### Protect against theft and sabotage acts

Our brief is not only about equipping the guest areas with the best safety and security systems. Most hotels have a considerable number of restricted areas, such as kitchens, service elevators, storerooms, stairways, and utility rooms. Areas such as these cannot be left unprotected. Bosch Energy and Building Solutions provides hotels with a comprehensive suite of solutions that deter crime without disrupting the time-sensitive workflow of the hotel staff.

Conference systems



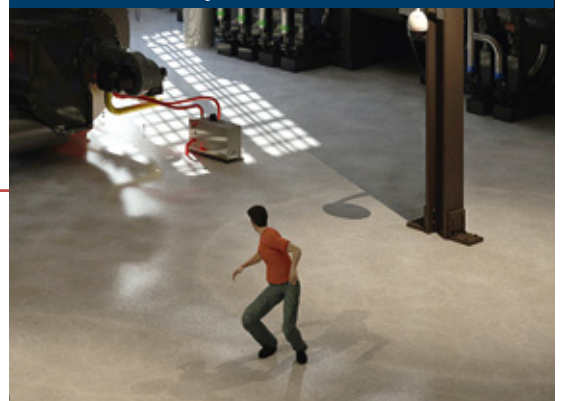
Professional sound systems



Video surveillance systems



Intrusion alarm systems



# Energy and Building Solutions

## Efficient energy services for your properties

We are your experienced partner for energy efficiency in hotels – and as an energy services provider, we keep energy costs low while increasing supply security and comfort.

### Energy services – individual energy solutions for your building

Our holistic partnership model provides you with a unique range of energy services. We can manage the energy and utilities supply of your single building or entire real estate portfolio – reliably, safely and efficiently, offering planning, implementation and operational services from a single source to help you achieve long-term reductions in your energy consumption for heating, cooling, ventilation and lighting. Partner with us and benefit from our strength and experience, individual energy solutions and maximum energy efficiency.

The amount of energy required always depends on the current state of your building and the technical facilities in place. Our tailor-made solutions for your energy con-

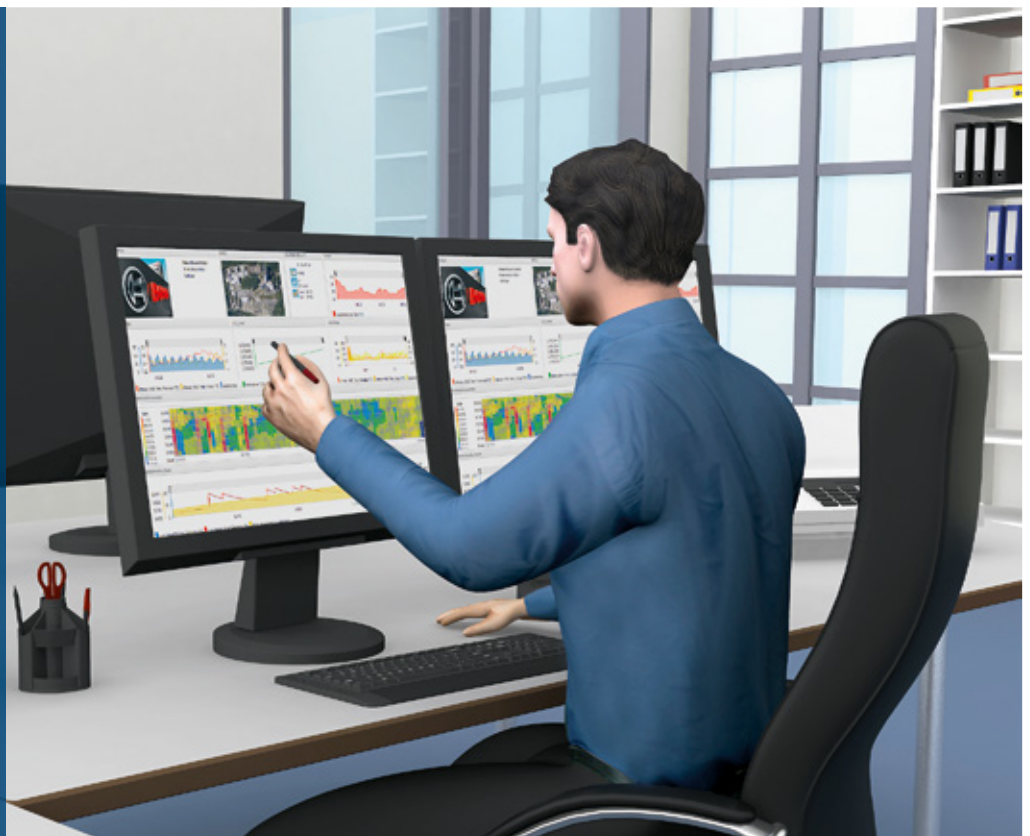
cept are made to meet any requirements regardless of how diverse these may be. Efficiency is not ready-made. Rather, it comes from experienced engineers who take even the smallest of details into account.

### Climate technology – greater efficiency and comfort with air conditioning and ventilation

Modern air conditioning and ventilation systems play a key role in the hotel industry. These systems need to ensure that the indoor climate is comfortable all year round, while also contributing to the energy efficiency of a building. With a conventional control system that generates directed airflows, both objectives are difficult to achieve. Continuous flows do not mix the air in the room in the most effective way, resulting in temperature layering, cold pockets and drafts. In addition, these

### Energy platform: Solve your energetic future tasks

- ▶ Get full consumption and cost transparency on the energy usage in your buildings
- ▶ See your data anytime and from any location
- ▶ Specific analysis with individual graphical reports according to your requirements
- ▶ Get an optimum of transparency and keep costs under control







#### Climate technology: Savings through patented ventilation control

- ▶ Increase comfort levels for guests of your properties
- ▶ Energy savings of 25–75% depending on building type
- ▶ Minimization of costs during construction and operation

systems require higher volumes of fresh air — cooled in the summer and heated in the winter — to be supplied to the room. This requirement not only increases the complexity of your site's systems, but also generates high energy costs.

Using our unique control algorithm, we can control your existing systems in an intelligent manner. We achieve, on average, energy savings of 25–75 percent in new and existing buildings. By mixing the supply air with room air in the most effective way, the temperature is kept consistent across the room, and drafts are prevented — increasing comfort for users throughout the building. We can achieve additional savings by combining this control algorithm with our innovative duct system.

#### Energy platform — greater transparency, reduced costs

Energy costs are a major factor in the hotel business. Our energy platform provides you with a full breakdown of your energy consumption and costs. The concept is as simple as it is effective: We first measure the precise consumption in all locations within your building where energy is converted or required. These values are then transferred to the energy platform via a secure connection and analyzed. They are then converted into useful data that you can access and use online.

The energy platform consists of four different modules that can be tailored to your specific requirements and used to manage your systems and energy consumption efficiently.

#### Audit: Initial analysis



#### Planning: Development of energy concepts



#### Operation: Successful long-term partnership





## Connected parking solutions

### Systems solutions for parking-lot management

With its active parking lot management system, Bosch pursues an integrated systems approach for connecting individual parking spaces and entire parking lots – both on-street (e.g., in downtown areas) and off-street (e.g., in parking garages).

#### Systems solutions from a single source

The concept comprises three main components: the parking space sensor, the gateway, and the backend (incl. a web portal and web-service interfaces). The parking space sensor detects a parking vehicle and relays this information to the cloud server. For both the parking-lot operator and the driver, this opens up the possibility of a whole array of new services, such as:

- ▶ Vacant parking spaces are easy to find
- ▶ Parking space reservation
- ▶ Cashless payment
- ▶ Additional location services
- ▶ Optimized parking-lot use
- ▶ Statistical analysis of parking-space and parking-lot use

#### Advantages

- ▶ Easy installation (on or in the road surface) of the parking space sensors
- ▶ Immediately operational
- ▶ Reliable occupancy detection with double measurement method using Bosch MEMS (micro-electro-mechanical system) sensors
- ▶ Up to seven years energy self-sufficiency
- ▶ Highly available incl. 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> level support
- ▶ Simple integration into existing IT infrastructure
- ▶ Identity management (multi-tenancy, roles, and rights)
- ▶ Easy retrofitting for existing parking spaces and parking lots





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