



## KEMPER Hygiene System



For decades, KEMPER has been synonymous with high-quality gunmetal and stainless steel fittings and valves for use in drinking water systems.

Since 2007, the company has been offering the KEMPER KHS Hygiene System: an innovative, automated system solution that prevents water stagnation. The KHS system is designed to maintain the temperature in cold, warm and hot drinking water installations and to ensure clean, safe and hygienic drinking water. High-performance valve technology combined with outstanding planning software guarantee the proper operation of drinking water systems.

This brochure presents a selection of hotels, hospitals and clinics, senior care facilities, nursing homes, schools, gyms and multipurpose buildings in which the KHS system is successfully deployed.

### Contact

Gebr. Kemper GmbH + Co. KG  
Metallwerke  
Harkortstraße 5  
D-57462 Olpe

Phone 02761 - 891 0  
Fax 02761 - 891 175

[info@kemper-olpe.de](mailto:info@kemper-olpe.de)  
[www.hygiesystem-khs.com](http://www.hygiesystem-khs.com)

## Reference Properties KHS

Type: Hospitals and Clinics



### Marienkrankenhaus Hospital, Siegen, Germany

One of our first reference systems is in operation at the Marienkrankenhaus in Siegen, a municipal hospital in the state of North Rhine-Westphalia. The KHS-Logic system control unit monitors the entire drinking water system, automatically triggers the flushing processes based on temperature and then logs them.



### Broadgreen Hospital, Liverpool, UK

Broadgreen hospital has 2,000 beds and specialises in rheumatic diseases. The southern annex of the complex has been successfully equipped with the KHS Hygiene System, including flow distributors and terminal VAV valves. In addition, a long-term study on the topic of microbiology in drinking water is being conducted at the hospital, during which the KHS Hygiene System has been successfully tested.



### AMC Medical Centre, Amsterdam, NL

The AMC in Amsterdam is one of the largest contiguous hospital complexes in Europe, comprising 30 large-scale buildings. In the most recently constructed hospital ward blocks, compliance with the legally stipulated parameters for maintaining cold, warm and hot water temperatures is ensured by the KHS system, featuring dynamic flow distributors and regulation via MASTER-SLAVE control components.



### Klagenfurt Regional Hospital, Austria

The LKH Klagenfurt Regional Hospital is Austria's largest general hospital. As in other parts of the hospital, the most recently built extension relies on Kemper KHS components to ensure floor circulation.

## Reference Properties KHS

Type: Hospitals and Clinics



### Caritas Hospital, Bad Mergentheim, Germany

The new „Mother and Child Centre“, built between 2009 and 2011, houses a nursing care unit for children and youth as well as maternity ward and paediatric intensive care unit (ICU). The ICU treats infants and children with weak or unstable immune systems, a decisive factor for installing the KHS system. The patients are highly susceptible to any type of infection. Three of the six floors pose potential infection risks and, among other things, require a supply of clean, safe and hygienic drinking water, which is ensured by the KHS system.



### Hannover Medical School, Germany

When it comes to renovation measures, the Hannover Medical School is insistent about pipe routing that prevents water stagnation and about guaranteed temperature maintenance. The system was equipped with KHS flow distributors in combination with KHS flushing valves that are actuated based on the temperature and thus limit the maximum cold water temperature.



### Hanse-Klinikum Medical Complex, Germany

The Hanse-Klinikum complex comprises 12 clinics and 3 institutes with a total of 841 beds for inpatient and outpatient care as well as for the day clinic. Here, several buildings, including the hospital ward, child and adolescent psychiatric units, and other areas were equipped with the KEMPER Hygiene System.

## Reference Properties KHS

Type: Senior Citizens' Homes, Nursing Homes



### Martinus-Höfe Nursing Home, Olpe, Germany

The "Martinus-Höfe" property in Olpe combines several purposes under one roof: Among other things, the state-of-the-art medical, residential and service centre houses a nursing care facility for seniors comprising 21 inpatient units for long-term and short-term care. In addition to other functions, the KHS system monitors the temperature in the cold drinking water system and automatically initiates temperature-controlled water exchange.



### Altkönig Stift Nursing Home for the Elderly, Kronberg, Germany

Within the scope of renovation measures, the bathroom unit connections of the 60 rooms were equipped with dynamic flow distributors for cold, warm and hot water. A calculation of the installation using the KEMPER Dendrit CAD software in combination with a subsequent simulation of real-time operation revealed considerable potential savings as compared to manual flushing systems.

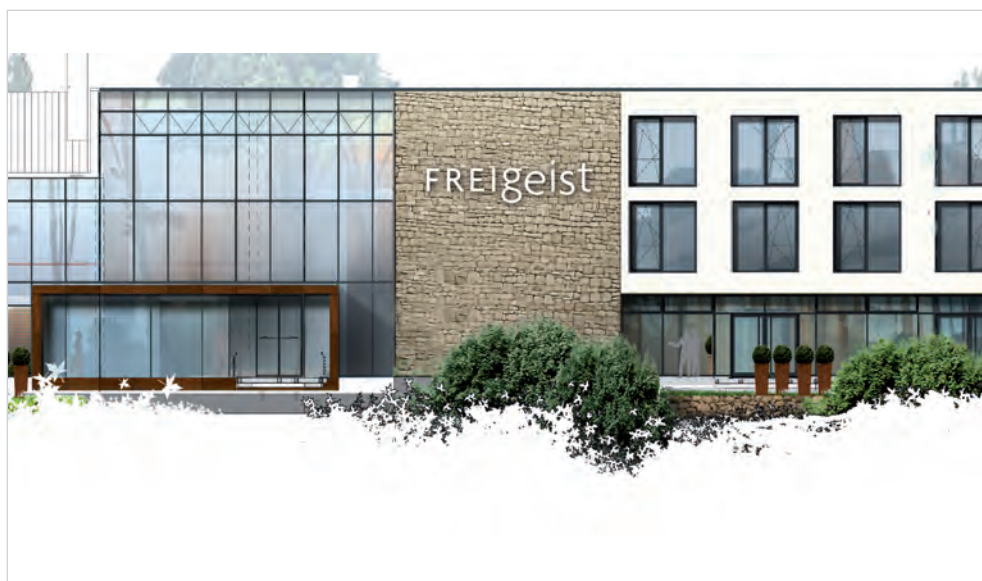
## Reference Properties KHS

Type: Hotels



### **“Waldorf Astoria” Hotel, Berlin, Germany**

The first Germany-based Waldorf Astoria hotel, the premium brand of the Hilton chain, is expected to open its doors in 2011 in the newly built 118-meter tall “Zoofenster” high-rise, located directly across from the Bahnhof Zoo public transit terminal. Of the 32 floors in the building, the hotel will occupy the third to fifteenth floors. KEMPER was also involved in building the first luxury Waldorf Astoria hotel in Germany: the company was commissioned to install a KHS Hygiene System in the drinking water system in order to prevent water stagnation.



### **Hotel Freigeist, Northeim, Germany**

The operator’s reason for deciding to deploy the KHS system was to ensure a supply of clean, safe and hygienic drinking water for the hotel guests. In addition, the hotel operating company wanted to make sure that it met its obligation to comply with the regulations of the 2001 German drinking water ordinance. The building was equipped with a total of 28 KHS Multi-Circ Distribution Units and two KHS timer sets.

## Reference Properties KHS

Type: Hotels



### NH Hotel, Ludwigsburg, Germany

The new 130-bed building erected for the well-known "NH Hoteles" hotel chain was equipped with the complete KHS Hygiene System, including the KHS-Logic system controller, to ensure that all floors are continuously supplied with clean, safe and hygienic drinking water.



### Hotel Lago, Neu-Ulm, Germany

The newly built four star hotel offers its guests an exclusive setting and ambience in all areas, whether it concerns dining, the reception or technical facilities.

This also includes a properly working, clean and hygienic sanitary system that is safe and comfortable for the guests. To ensure this, the approximately 56 bathroom units were fitted with the KHS system. The line-by-line flushing unit is timer-controlled, the individual lines are routed into the main line on the 5th floor with a B-valve and KEMPER "Eta-Therm".



### Schloss Neutrauchburg, Isny, Germany

The Schloss Neutrauchburg hotel is a company of the Waldburg-Zeil Kliniken group of hospitals and clinics. Schlosshotel Neutrauchburg, which dates back to the 18th century, is part of the seminar and conference centre, offering hotel accommodations, catering and dining. It is one of the first properties in the state of Baden Württemberg to be fitted with the KEMPER KHS Hygiene System.



### Eberhards Hotel, Bietigheim, Germany

The hotel and restaurant, which opened in April 2010, is idyllically located directly on the Enz River and close to Bietigheim's historic old town. The restaurant, with also features a bar, has 66 seats, along with 16 additional seats on the winter/summer terrace and about 100 seats outside. Compliance with the mandatory safe, clean and hygienic drinking water measures are documented in a hygiene log via the KHS-Logic system controller, which is installed along with other KHS components.

## Reference Properties KHS

Type: Schools, Multipurpose Buildings



### Danish Secondary School, Schleswig, Germany

The 15,000 m<sup>2</sup> building was erected on a piece of land spanning 10.4 hectares on the site of the former "Auf der Freiheit" military barracks east of the city centre, directly on the Schlei Inlet. KHS hygiene flushing units and KHS Multi-Circ Distribution Units ensure the automated exchange of water, thus reducing personnel and operating costs.



### Wittlich Vocational School, Germany

With more than 1800 students, the "Berufsbildende Schule Wittlich" is the largest school in the county. The school's continuous supply of fresh drinking water is ensured through the installation of the KHS Mini Control System in combination with dynamic KHS Multi-Circ Distribution Units, and in the warm/hot water circuit in conjunction with KEMPER regulating valve technology in the form of "Multi-Fix" and "Eta-Therm" valves.



### Marist House Fürstenzell, Germany

With a discerning selection of materials and meticulous planning down to the last detail, the German Province of the Society of Mary, based in Meppen, built a residence for nine priests directly adjacent to the Cisterian Monastery in Fürstenzell. The KEMPER KHS Hygiene System was installed in the building to ensure that the quality of the drinking water, right up to the tapping point, complies with the German Drinking Water Ordinance.

## Reference Properties KHS

Type: Various



### Emsland Power Plant, Lingen, Germany

The unusual aspect about this property is its purpose: The newly constructed building, built for use by external companies, is only occupied for about one month a year for auditing reasons; it is empty during the rest of the year. The quality of the drinking water is at serious risk, since the conditions of use that formed the basis for the planning do not apply for almost 11 months of the year! The KEMPER KHS Hygiene System ensures a regular, automatically controlled exchange of water, thus making certain that normal operation conditions in accordance with the intended purpose are also maintained



### UNIQA Tower, Vienna, Austria

The new landmark on Danube Canal is considered to be one of the most architecturally and technologically interesting office buildings in Central Europe. Since its opening, it has evolved into both a new attraction and hotspot in Austria's capital city. In February, 2008, the UNIQA Tower was officially awarded the EU's "Green Building Certificate". The Austrian Energy Agency, which supervises the Green Building programme in Austria, has distinguished the striking building in Vienna 2 as an "energy-conscious new building". The KHS system is an integral part of the building's eco-friendly approach, reducing the heat loss that results from water exchange and circulation.

## Reference Properties KHS

Type: Various

**KEMPER**



### Max Planck Institute, Stuttgart, Germany

The entire drinking water system in this building was refurbished and modernised.

A particular focus was put on connecting the emergency eyewash stations using 300 KHS Multi-Circ Distribution Units, since, particularly in this area, clean and hygienic drinking water is absolutely essential at each tapping point.

**KHS**<sup>®</sup>



### German Federal Police, Neustadt i. H., Germany

During the renovation of the complex, the sanitary facilities in the German Federal Police's accommodation building no. 44 in the city of Neustadt in Holstein were also modernised. The drinking water system was equipped with 16 lines with more than 60 KHS dynamic Multi-Circ Distribution Units. The system is controlled with a KHS-Logic system controller equipped with integrated temperature and volume regulation.

## Reference Properties KHS

Type: Offshore



### Thialf

In a joint venture with four other strong partners, KEMPER founded the Kronios platform for the purpose of acquiring more clients in the offshore, cruise ship and luxury yacht building sectors. Utilising the pooled expertise of the partners, "Thialf", the world's largest crane vessel, has already been equipped with KHS valve technology from KEMPER, for example.



### DCV Balder

The DCV (deepwater construction vessel) Balder is a crane and work vessel built in 1978. The vessel has two cranes, which, at a 33.5 meter radius, are capable of lifting loads up to 6300 tonnes in a tandem lift. The larger of the two cranes can lower a load of 360 tonnes down to a depth of 3000 meters.

Use of the KEMPER Dendrit CAD software for designing and planning the entire drinking water installation as well as equipping the entire system with KHS valve technology ensure a supply of clean, safe and hygienic drinking water, even under harsh conditions.