



Fire Protection of Hotels

With SEM-SAFE® High-Pressure Water Mist System

Danfoss Semco A/S

Total Solution Provider of Certified Fixed Fire Fighting Systems

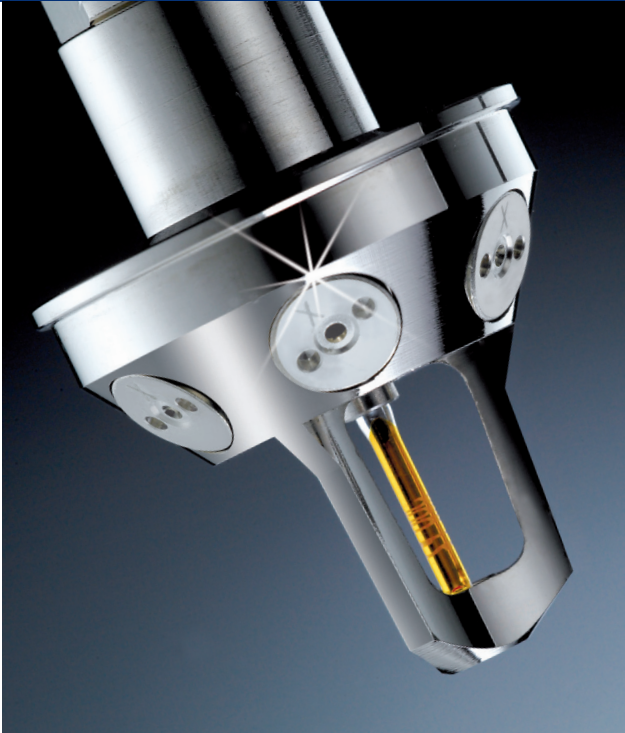


Aesthetic design and reliability with SEM-SAFE® high-pressure water mist system

Danfoss Semco's SEM-SAFE® high-pressure water mist system is a state-of-the-art fire fighting system, providing optimum protection for people and surroundings. The SEM-SAFE® system:

- Is harmless to people and environmentally friendly
- Allows for safe evacuation of guests and staff
- Reduces business interruption as water damage is minimised
- Provides freedom in architectural design to match the surroundings





SEM-SAFE® in brief

SEM-SAFE® is a high-pressure water mist fire fighting system that uses micro droplets released through nozzles into protected areas. It comprises a high-pressure modular pump unit, section valves, piping and water mist nozzles.

The system is safe, efficient and environmentally friendly. With small pipe dimensions, large coverage, minimal water consumption, a compact skid unit and simple design, SEM-SAFE® high-pressure water mist is the perfect choice to protect hotels against fire, with reliability and cost-saving in mind.

Architectural design

The aesthetic design of our pipes and nozzles fits perfectly into a beautiful hotel environment. Due to the small and convenient pipe sizes, the system is easily installed, even retrofitted. The compact system also leaves more space for money generating activities.

Safe evacuation

- The priority in case of a fire is the safe evacuation of guests. The superior properties of water mist make this fire fighting technology the best choice for protecting a hotel
- The system is only activated in areas where fire is detected. Other areas in the hotel will not be affected

Minimised business interruptions

- Using high pressure water mist keeps secondary damage to a minimum due to the low water consumption
- Water coming from the pipes is clean water as SEM-SAFE® uses stainless steel pipes that are corrosion resistant. In case of system release, the clean-up is easier, faster and incurs lower costs

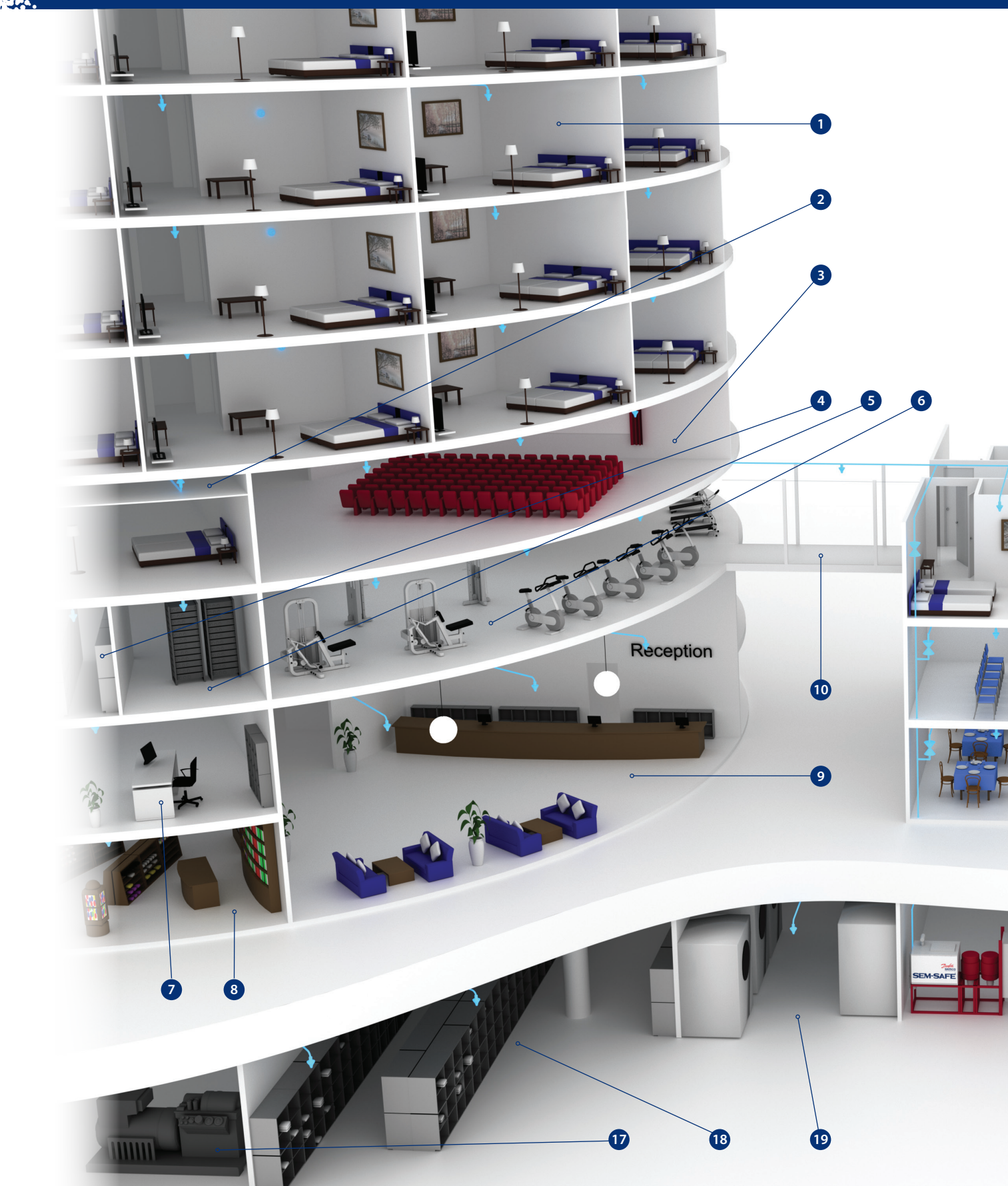
Fast installation

- Easy to install in modern hotels, where the SEM-SAFE® installation will not disrupt any of the desired architectural features
- Easy to retrofit in existing hotels where the system will blend in well with the surroundings. The small pipe sizes and large spacing make it simple and easy to install
- Perfect solution for old buildings, where valuable historical preservation is important



SEM-SAFE®

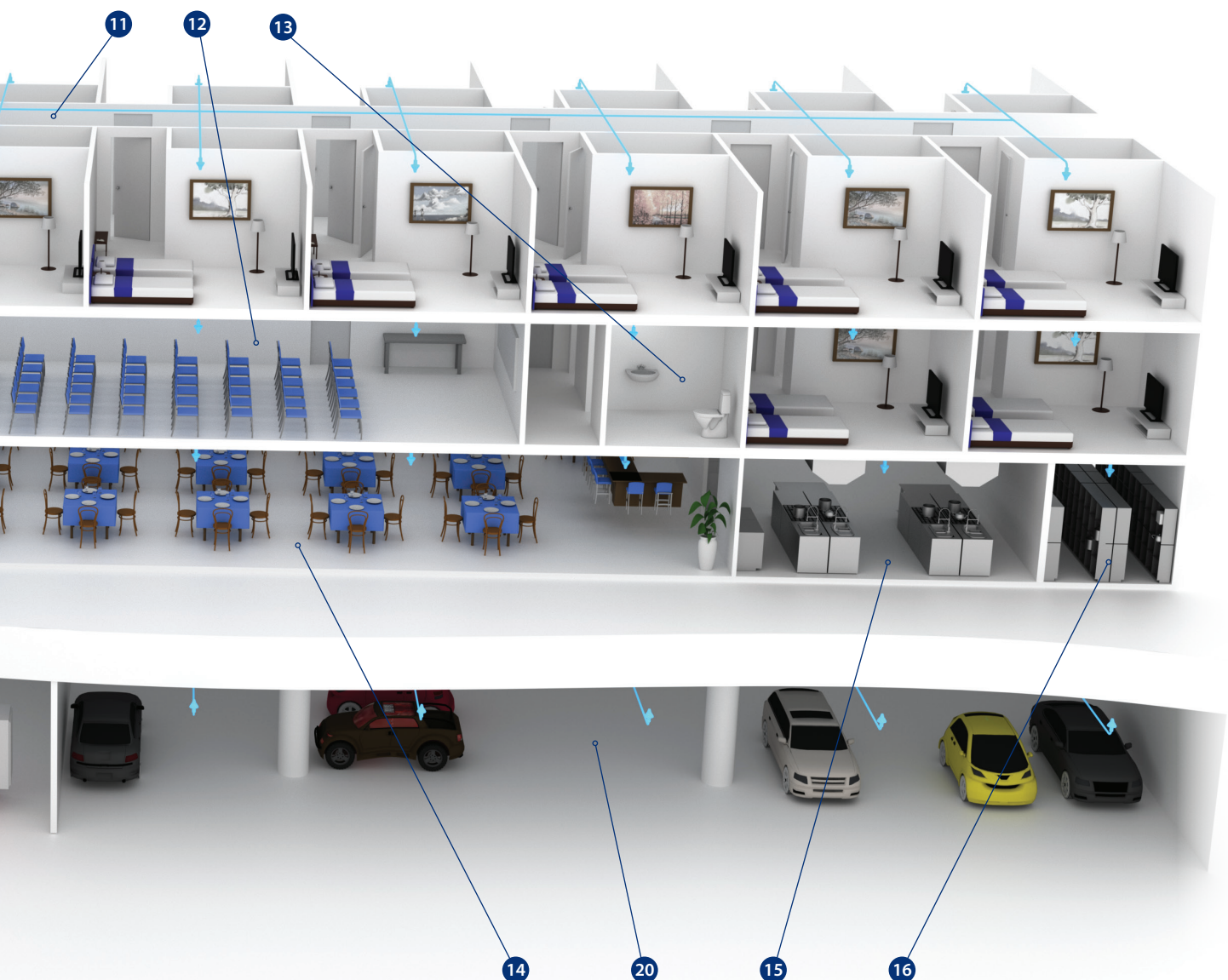
One single system to protect all areas in the hotel





Danfoss Semco provides fire fighting solutions for areas such as:

- 1 HOTEL ROOMS
- 2 SUSPENDED CEILINGS
- 3 THEATRES
- 4 ARCHIVES
- 5 SERVER ROOMS
- 6 FITNESS ROOMS
- 7 OFFICES
- 8 SHOPS /BOUTIQUES
- 9 RECEPTION
- 10 GLASS CORRIDORS
- 11 CORRIDORS
- 12 CONFERENCE ROOMS
- 13 BATHROOMS
- 14 RESTAURANTS / BARS
- 15 KITCHENS
- 16 TECHNICAL ROOMS
- 17 GENERATOR ROOMS
- 18 STORAGE AREAS
- 19 LAUNDRY ROOMS
- 20 CAR PARKS



SEM-SAFE® high-pressure water mist system

How SEM-SAFE® works

When water is forced through nozzles at high-pressure, a fine mist is formed that has a two-fold extinguishing effect – it rapidly cools down the fire and starves the flames of oxygen to reduce damage and quell fires.

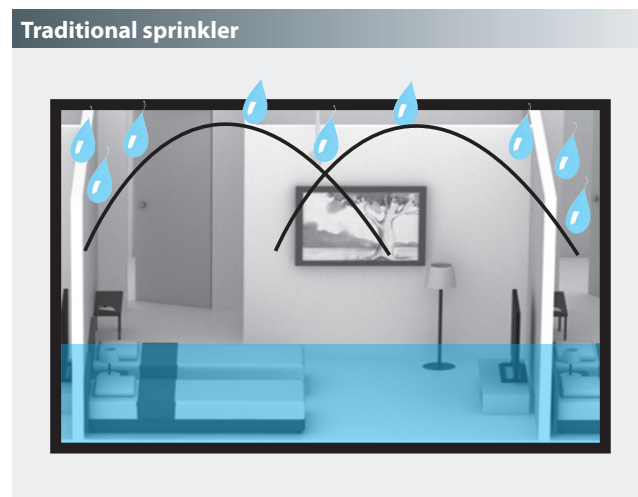
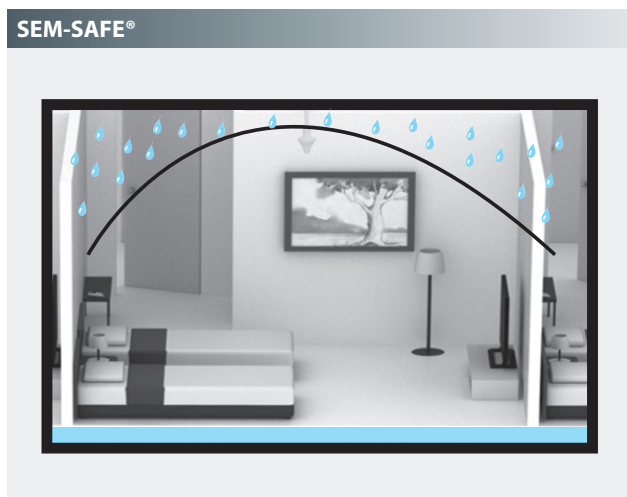
Benefits of SEM-SAFE® high-pressure water mist

Tackles fire swiftly and efficiently

- Radial heat is blocked efficiently. This helps in protecting against any structural damage by not allowing the flames to expand
- Gentle to electrical equipment due to small water droplets. Therefore, the functionality of the electrical equipment in the hotel is not disrupted and data is saved

Money-saving solution

- The small water droplets evaporate immediately during discharge. The result is minimal water damage to surrounding equipment, reducing operational downtime to a minimum
- With fewer nozzles required thanks to optimized spacing and the need for only one pump unit for all applications, installation cost and time, as well as required service interventions, are considerably reduced
- Our high-pressure pumps are water-lubricated and hence virtually maintenance-free
- With 30% fewer components compared to other competing systems, the SEM-SAFE® system is lighter and more compact. This allows for easier installation, simplified maintenance and valuable space saving
- Cost of water supply is significantly reduced due to less piping, reduced water demand from the water supply, lower taxes and no or significantly smaller water reservoirs
- No need for other technologies. SEM-SAFE® is the perfect solution for fire protection of more sensitive areas such as server rooms and archives



SEM-SAFE® uses up to 50% less water when compared to low-pressure water mist systems and up to 80% less water when compared to traditional sprinklers

Proven experience across the world

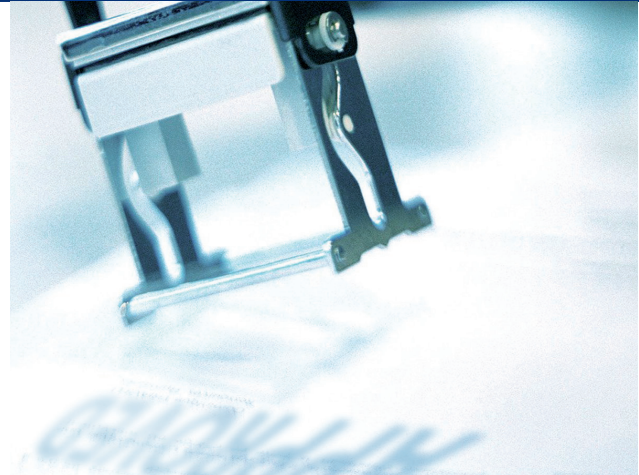


For more than 15 years, Danfoss Semco has been installing fire fighting systems in both new and retrofit hotels all over the world. The experience we build with each installation and project allows us to provide our customers with the best and most reliable fire fighting solution on the market. The excellent fire suppression properties, and the system's advantages that allow for sustainability and reliable fire protection of buildings, people and the environment has made SEM-SAFE® the right choice for hotels, such as:

- *CitizenM*, Holland
- *Hotel Gutshof Liepen*, Germany
- *CitizenM*, England
- *Scheelehof*, Germany

In-house design

We have the necessary experience and technological know-how to provide you with the optimal fire fighting system based on fire risk analysis for your hotel.



Tested and approved

The design of the SEM-SAFE® high-pressure water mist system is based on full scale fire tests. For industrial and commercial applications, approvals are obtained through testing in accordance with specifications from, for example, FM, UL and ISO, as well as from the European guideline CEN/TS 14972 and approvals from DBI and VdS.



Internal HSE&Q system in accordance with:

- DS/EN ISO 9001:2008
- DS/EN ISO 14001:2004
- DS/OHSAS 18001:2008



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Danfoss Semco A/S

History

Danfoss Semco A/S is a global leader in the sale, development, production and service/commissioning of certified fixed fire fighting systems. In 2006, two leading firms in the field, Danfoss A/S and Semco Maritime A/S, joined forces to form the present company, with Semco Maritime boasting over half a century of expertise in designing and installing fixed fire fighting systems. All the while, Danfoss has developed and delivered key components for the high-tech systems.

Today Danfoss Semco is an integral part of the Danfoss Group, Denmark's largest industrial manufacturing company with a daily output of more than 250,000 finished components. With more than 24,000 employees worldwide, Danfoss is truly a global company.

Business areas

Our company is located in Odense, Denmark, and operates three main business areas.

Our water mist division comprises two business areas: the marine division and the industrial and commercial division. The former has pushed the boundaries for development and design to offer a wide range of solutions for numerous application areas on almost any type of vessel.

Within the industrial and commercial area, Danfoss Semco has a successful track record with different applications, ranging from complex fire fighting systems for museums and heritage sites to industrial applications, office buildings and universities.

Our gas and foam division is the world's largest low-pressure CO₂ based fire fighting systems supplier for the marine industry. This division supplies gas, foam and dry chemical powder systems worldwide

In-house manufacturing of key components

Danfoss Semco operates in-house research, development and manufacturing facilities of all critical components to ensure uncompromising performance and cost-effective systems. This puts us in a unique position to maintain our technological leadership in the future.

Proven experience

Danfoss Semco has supplied fire fighting systems for a wide range of commercial and industrial applications, including prominent projects such as:

- *Metro line* in Shanghai, the fastest-growing rapid transit system in the world
- *Equinix* in the Netherlands, a worldwide renowned data centre
- *Alston* in Denmark, a 28,400 m² building housing a university, concert hall and a research park
- *AB6* in Denmark, a unique office block in the heart of Copenhagen
- *Heinrich-Hertz-Institute* in Germany, a high-rise building for leading-edge IT research and development
- *Shanghai Shuguang Hospital*, one of the top 100 national hospitals in China



Hotel Scheelehof in Germany