

Double safety for irreplaceable documents in a historic building

Royal Archive, Copenhagen, Denmark



The Royal Archive is located in a historic building which is about 400 years old. The main purpose of The Royal Archive is to collect and store historical sources – the earliest documents origin from the early Middle Ages - and make them available to the public. It has more than 160 kilometers of shelves storing huge quantities of records from Danish public authorities.

Fire presents one of the biggest threats for such a historic building and the irreplaceable documents. When evaluating a solution not only the value and large number of documents to be protected pose a great challenge but also the fact that the system design needs to be tailored to the existing building structure, respecting the historic value of the building. To find the optimal solution for the reliable protection of these values a thorough evaluation process and extensive testing was done in close cooperation between The Royal Archive and Siemens. It was decided that Sinorix™ H₂O Gas was the best solution for this application and risk of fire.

With the Sinorix H₂O Gas extinguishing solution as well as modern fire detection and services Siemens was able to meet the challenges to the full satisfaction of the customer.



Sinorix H₂O Gas offers double protection

■ **The Royal Archive, Copenhagen**

- Historic building which is more than 400 years old
- Storage of valuable documents from Danish public authorities **such as maps, parish registers**, census lists, financial accounts and other types of unique documents, registers and files

■ **Effective protection of historic building and valuable documents**

- Evaluation and installation of a reliable large-scale extinguishing system for a historic building and huge quantities of irreplaceable documents
- System design needs to fit existing building, i.e. limited space available
- Historic value of building needs to be respected, i.e. structural alterations limited

■ **Comprehensive fire safety solution from one single source**

- In-depth risk assessment , extensive evaluation support and testing
- Designing, installing, and commissioning a large-scale system respecting the respective requirements of the building and documents
- Integral fire safety concept – including not only extinguishing but also fire detection and maintenance

■ **Advanced extinguishing solution**

- Sinorix™ H₂O Gas has been selected because it is optimally suited to protect historic documents and can be tailored to the specific requirements
- Nitrogen and water are combined for a dual effect that quickly and reliably extinguishes the fire and prevents reignition
- Highly flexible system allows large-scale, multi-sector solutions
- Tailored engineering solves space problem with decentralized positioning of cylinders
- Sinorix H₂O Gas minimizes secondary damage with its fine spraying technology
- The two natural extinguishing agents nitrogen and water are chemically neutral and safe for the environment and people

■ **Safety for historic assets**

- The customer was highly satisfied due to the professional support during the evaluation and testing phase and the designing, installation and commissioning of the optimal solution for his specific needs.

Highlights

- Tailored solution offers reliable protection for historic building and large quantities of valuable documents
- Integral fire safety solution from one source
- Highly flexible system during planning phase, tailored in engineering
- Reliable extinguishing and effective prevention of reignition
- Suitable for extinguishing smoldering and deep-seated fires
- Presents no hazard to human health and the environment
- Approved system according to VdS 2380 (S307002)

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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