

A Reliable Fire Protection System to Ensure Full Operation of Data Centers

What is a Data Center

Data Centers are places where data is processed, organized, and stored. Many data centers are located in buildings that house complex equipment such as servers, storage and uninterruptible power supplies that enable the proper functioning of any information system 24/7 every day of the year.

Data Centers must be equipped with fire protection systems recommended by insurance companies, designed and implemented to minimize damage to the servers housed in Data Rooms. They also protect the entire structure, all technical rooms in service of business continuity, from office protection, storage areas, rooms containing power backup systems, transformer rooms, and rooms with lithium batteries, as well as all corridors and common areas to ensure safe evacuation for the personnel present.

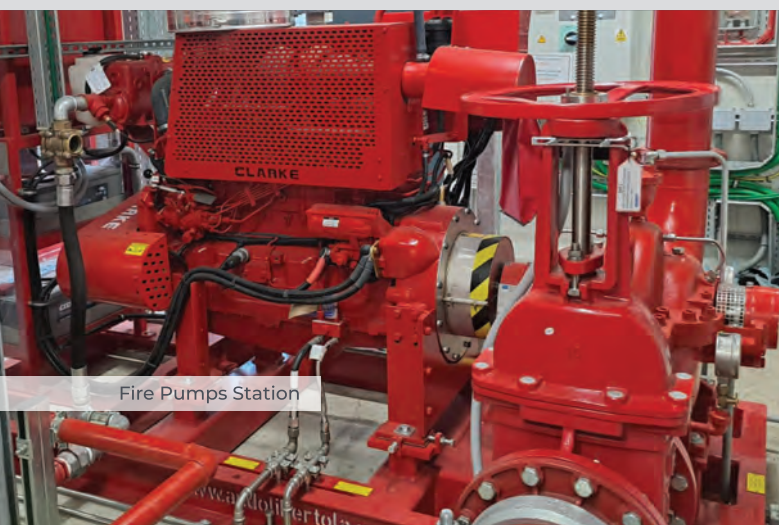
Connected and Protected with Pre-Action Sprinkler Systems

In hosting services and infrastructures for many companies, the owner of a Data Center is committed to ensuring service continuity.

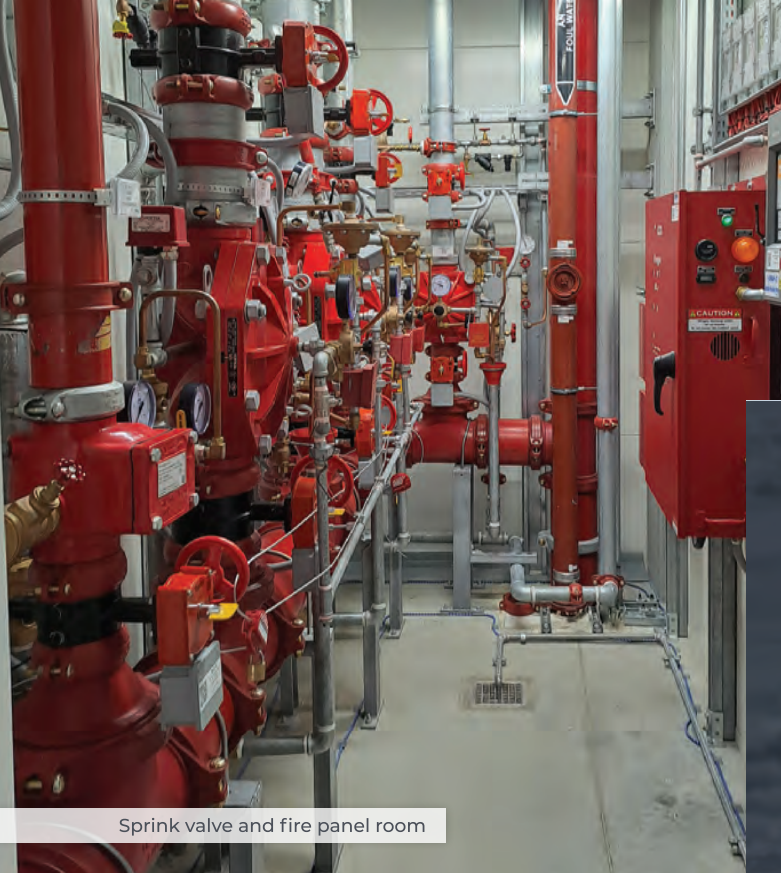
A pre-action sprinkler fire protection system (with double interlock) is the ideal solution in this context as it can target and control fires effectively, eliminating costs associated with accidental activations. It is only activated when the IRAI system intervenes simultaneously with a decrease in air pressure due to the opening of the sprinkler nozzle at the preset temperature.

The pre-action sprinkler system allows for targeted fire protection in the affected area, ensuring safety without interrupting Data Center operations. Additionally, with the sprinkler system, it is not necessary to seal openings for the passage of cables, fiber, etc. ensuring targeted protection and significantly lower costs, both in installation and maintenance.

Sebino, in collaboration with a prestigious engineering company (acting as main contractor), has been responsible for the structural design, management and installation of fire suppression, detection and alarm systems for a Data Center built in Northern Italy. The Data Center, owned by a major global operator, has an installed power of 19 MW and a colocation space above 5000 square meters.



Fire Pumps Station



Sprink valve and fire panel room



Successfully Faced Challenges

Sebino, an Italian leader in fire protection systems installation, handled the structural design (with the help of BIM), supply, and commissioning of integrated detection and extinguishing systems for the Data Centers. This was carried out within the required timelines, in parallel with the execution by other building suppliers. The main challenge was integrating systems with other installations, working simultaneously and within the same spaces with all technicians and installers.

Sebino - The Reliable Partner

Sebino Group is an Italian leader in the design, installation and maintenance of fixed fire protection and security systems. The group includes divisions such as **Sebino Security S.r.l.** (detection systems, CCTV, access control, intrusion detection), **Sebino Service S.r.l.** (maintenance management and customer support), **Sebino Fire RO S.r.l.** and **Sebino S.p.A.** (holding company).

Sebino provides tailored solutions throughout Italy and Europe, offering reliable and quality products, uncompromised performance and economically advantageous fire protection systems.

Sebino may provide product information (Product Information), including technical information, specifications, recommendations, catalogues, and other materials, to support customers in understanding and selecting products, technologies, and services offered. Sebino does not assume any responsibility for errors in Product Information and reserves the right to modify its products, technologies, and services without notice. Product information does not imply a license related to Sebino's intellectual property. The customer is solely responsible for evaluating and selecting products and technologies and determining if the product, technology, or service is suitable for a particular purpose or application method.

Sebino Fire and Security is a registered trademark of Sebino S.p.A. or of Companies of Sebino Group.

The Sprinkler System Used

The data halls, corridors and adjacent technical rooms of the Data Center are protected by a pre-action sprinkler system. A water station composed of 2 fire pumps (FM Listed), each providing 1500 USGPM at 8.8 bar, was installed for the Data Center to serve the sprinkler and hydrant systems.

For each protected room, there are pre-action sprinkler valves to reduce the risk of accidental discharge, along with a wet valve (with flow switch) protecting the technical fire room.

The sprinklers cover all critical areas of the building uniformly, based on the applied technical standard. The entire installed system is shared with and approved by Factory Mutual.

Pre-action sprinklers are activated by the IRAI system, also installed by Sebino.