

A man with a mustache, wearing a grey turtleneck, a patterned blazer, and light-colored trousers, stands in a library. He is holding a pair of glasses in his right hand. To his right is a wooden lectern with an open book on it. The book's page features a colorful illustration of a dragon and the text "Der Feuerdrache". The background is filled with tall bookshelves packed with books.

SIEMENS

Sinorix CDT – innovative, sustainable and safe

Keep fire virtual. With intelligent extinguishing solutions from Siemens.

Answers for infrastructure.



Sinorix CDT – innovative technology for flooding at a constant mass flow

Sinorix CDT is an innovative extinguishing system based on nitrogen or argon that provides constant gas discharge. As a result, the size of overpressure flaps can be reduced by up to 70%.

Innovative extinguishing at a constant mass flow

Sinorix™ CDT (Constant Discharge Technology) is a regulated extinguishing system that uses nitrogen or argon as an extinguishing agent. A conventional unregulated extinguishing system follows an exponential discharge characteristic with a significant peak at the beginning of the discharge. The Sinorix CDT technology consists of a cylinder valve with a pressure-regulating function which discharges the gas into the flooding zone at constant mass flow throughout the entire flooding time. This eliminates the peak at the beginning of the discharge and thus lowers the maximum noise level.

Thanks to the constant mass flow, the cross-section of the pipes can also be dimensioned smaller than with conventional unregulated extinguishing systems, and the size of the overpressure flaps can be reduced by up to 70%. Thus, Sinorix CDT is especially suited for interior or cellar rooms, where large overpressure flaps are hard to install due to structural conditions.

High flexibility in system planning and engineering

Sinorix CDT is applicable for both single- and multi-sector systems and can be tailored for a wide range of applications. It is possible to position the cylinder battery either centrally or decentrally.

Sinorix CDT – typical applications

- Data centers and server rooms
- Telecommunication systems
- Cable ducts
- Electrical switching rooms
- Control rooms
- Technical and machine rooms

Customized design thanks to precise calculation

Sinorix CDT is designed using a calculation program tested and approved by VdS. Depending on the level of risk of fire and the individual requirements, the quantity of extinguishing agent, the cross-section of the pipes, number and drilling of nozzles are all calculated to fit the specific application precisely.



Legend

- 1 Fire detection and extinguishing control panel
- 2 Fire detector
- 3 Aspirating smoke detector
- 4 Alarm sounder
- 5 Combined sounder beacon
- 6 Extinguishing agent cylinders
- 7 Piping network with nozzles
- 8 Overpressure duct

Reliable and safe extinguishing

Sinorix CDT uses the inert gases nitrogen or argon for extinguishing. Inert gases extinguish a fire by reducing the oxygen volume concentration in the protected area – to a level at which the fire can no longer burn. Nitrogen and argon excel thanks to their excellent extinguishing properties for fire classes A, B, C and D.

Nitrogen and argon are harmless to the environment and safe for people. Ambient air, for example, naturally contains the two gases. Depending on the risk of fire and national guidelines, Sinorix inert gas extinguishing systems are designed as people-safe systems.

No damage to sensitive equipment

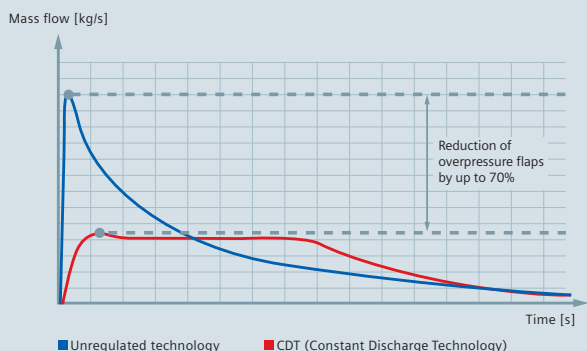
Nitrogen and argon have poor electric conductive properties and are chemically inert. As a result, they do not create any harmful reaction products. This allows optimal protection of critical applications with electric and electronic equipment like data centers or server rooms.

Using pure gases enables easy and cost-efficient sourcing

Using pure inert gases instead of a mixture of different gases facilitates refilling because pure gases are widely available. Easy refilling minimizes the downtime of the extinguishing system after a discharge – and also reduces costs.

Highlights

- Innovative extinguishing technology at a constant mass flow, without pressure peaks
- Reduction of overpressure flap size by up to 70%
- Reliable extinguishing with nitrogen or argon – safe for people, assets and the environment
- High flexibility in system planning and engineering
- Approved by VdS



University hospital Freiburg, Germany

Sinorix CDT offered the ideal protection for the interior server and electrical switching rooms as well as for the other rooms of the data center. Thanks to Sinorix CDT, overpressure flaps could be dimensioned considerably smaller in size compared to standard nitrogen extinguishing systems.

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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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Answers for infrastructure.

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

“We are the trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”