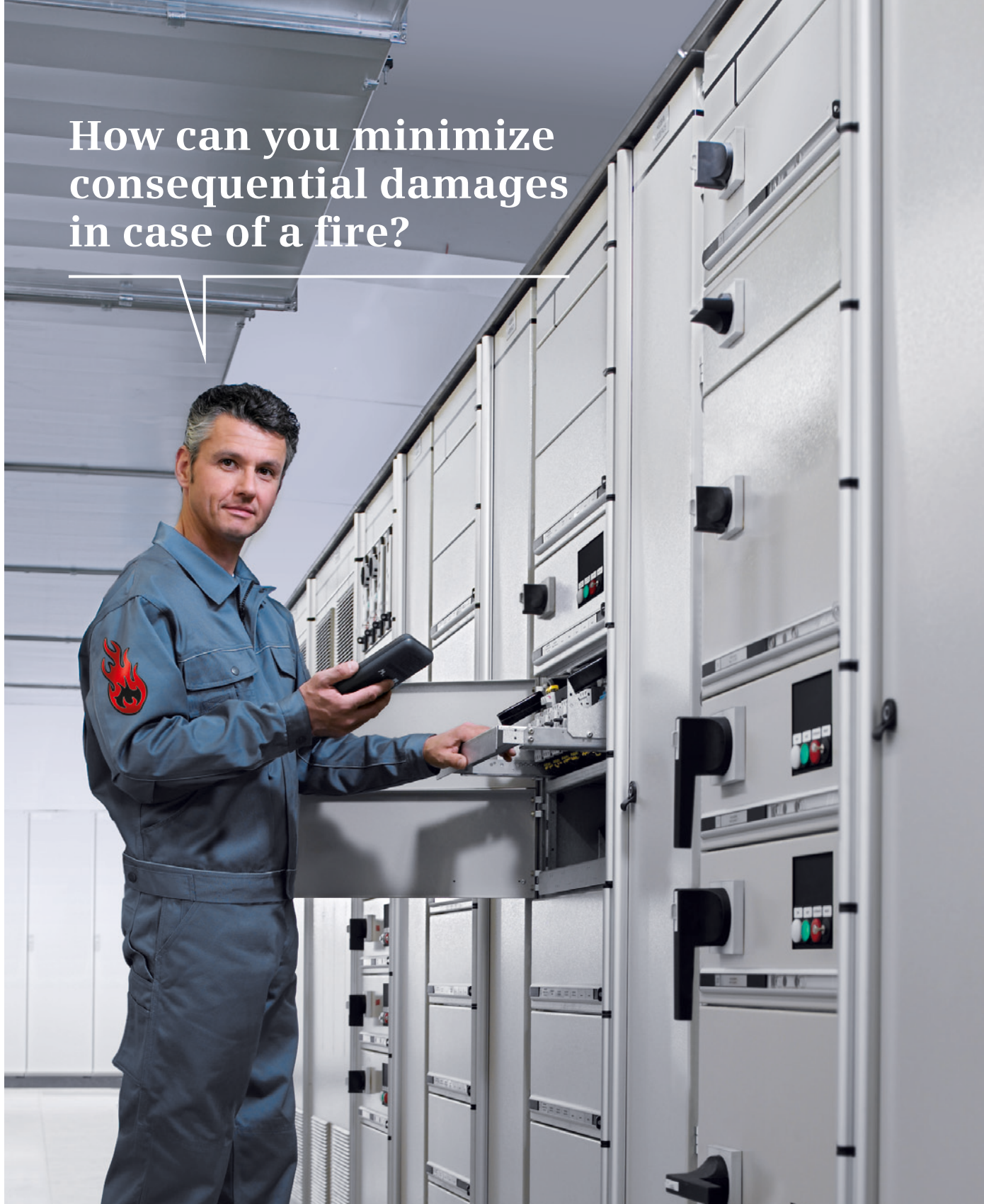


How can you minimize
consequential damages
in case of a fire?



With intelligent extinguishing solutions from Siemens.
Sinorix 227 – fast, effective, and reliable.

Answers for infrastructure.

SIEMENS



Reliability – the intelligent solution for effective protection

Reliable extinguishing systems optimally protect assets, business processes, and people from fire. The Sinorix™ 227 extinguishing solution is based on a chemical agent with excellent extinguishing properties. The high reliability of this solution reflects Siemens' extensive experience in the field of extinguishing. The solution also includes a comprehensive service offering – from risk assessment, system design, and installation to commissioning and maintenance.

Sinorix 227 is particularly suitable for electrical and electronic risks of fire, and quickly and reliably extinguishes fires. Thanks to the 42-bar technology from Siemens, Sinorix 227 extinguishing agent cylinders fit into even the smallest storage spaces, and the solution can be adapted very flexibly to site conditions.



Sinorix – intelligent extinguishing solutions to keep fire virtual

■ Sinorix – fire protection from Siemens

A perfect fire protection solution requires technology and expertise. Sinorix, the intelligent extinguishing solutions, offer you the latest technologies based on

long-term know-how and experience in fire detection and extinguishing from a global partner. The solutions are tailored to your individual needs to maximize business continuity. Fires are detected early and extinguished quickly and reliably.

Sinorix high-quality solutions protect people, environment, processes, and assets. The solutions also comprise a comprehensive service portfolio – from risk assessment, system design, installation, and commissioning to maintenance.

Sinorix portfolio overview

■ Sinorix CDT (Constant Discharge Technology)

Innovation based on extinguishing with nitrogen to provide constant gas discharge that allows a reduction of overpressure flaps by up to 70%.

■ Sinorix 1230

Solutions based on the environmentally friendly extinguishing agent 3M™ Novec™ 1230 Fire Protection Fluid and low- or high-pressure technology for highest extinguishing efficiency and flexibility in engineering.

■ Sinorix H₂O Gas

Highly efficient combination of nitrogen and water extinguishing technology with an additional positive cooling effect – for secure extinguishing and reliable room protection.

■ Sinorix H₂O Jet

Unique two-phase flow technology that generates fine water droplets at low hydraulic pressure – for efficient control of open fires as well as for accurate extinguishing in object protection.

■ Sinorix N₂ • Ar • CO₂

Extinguishing solutions with natural agents for maximum flexibility in design and engineering of systems.

■ Sinorix 227

Extinguishing solutions based on the globally known HFC 227ea with low- or high-pressure technology for fast and reliable extinguishing.

■ Sinorix al-deco STD/ Sinorix al-deco PLUS

Two object protection systems for machine tools offering reliable fire detection and effective extinguishing. Sinorix al-deco PLUS additionally provides integrated personal protection.

■ Sinorix Door-Fan-Test

The Door-Fan-Test from Siemens offers a simple, cost-effective, and environmentally friendly method for measuring room tightness and can also be used to directly locate leaks.

Intelligent means: partnership.
Sinorix – long-term experience
from a global partner.

Intelligent means: flexible.
Sinorix – adaptable for any risk of fire.



With Sinorix, you benefit from a global partner with extensive experience in fire protection – for example, Siemens already offered innovative extinguishing solutions 100 years ago. In addition, we support you with a comprehensive range of services that are tailored to your needs.



Sinorix offers solutions for every risk of fire and can be adapted to your specific object or room protection requirements in a flexible way.

Intelligent means: innovative.
Sinorix – most advanced technologies
for highest effectiveness.

Intelligent means: tailored.
Sinorix – customized for your
unique requirements.



Sinorix innovative extinguishing solutions are based on new insights and inventions and thus deliver cutting-edge technologies with the highest effectiveness. Our expertise and innovative strength are at your disposal around the world.



Sinorix extinguishing solutions are tailored to your individual applications. Whether an object or a room, a single or a multi sector needs to be protected, we support you in assessing the risk and selecting the best technology for your business.

Intelligent means: reliable.
Sinorix – for optimized business continuity.

Intelligent means: sustainable.
Sinorix – to protect people,
environment, processes, and assets.



Long-term experience and integrated solutions tailored to your requirements ensure reliable fire protection that supports the continuity of your business processes.



Siemens offers you a comprehensive range of extinguishing solutions to protect people, environment, processes, and assets. Siemens supports you today and for years to come to make your investment a long-term win.

Sinorix 227 – quick extinguishing with a chemical agent

■ Reliable and efficient

Sinorix 227 is a reliable solution based on HFC 227ea, an extinguishing agent known around the world, and 42-bar technology that makes it particularly efficient and space-saving. Whether for valuable systems and data, people or the working environment, Sinorix 227 provides optimum protection in case of fire and helps ensure business continuity.

■ Extinguishing with many benefits

The extinguishing agent of Sinorix 227 is very effective and works at low extinguishing concentrations to protect people and assets. The extinguishing agent is chemically inert and has low electric conductivity. Sinorix 227 provides ideal protection especially for areas with electrical and electronic risks of fire. Extinguishing without leaving any residue and without risk of corrosion is the optimal prerequisite to contain for example a smoldering fire in electrical switching rooms, telecommunication systems, data centers or server rooms – before it even gets started.

■ Integrated fire safety from an experienced partner

As one of the world's leading providers of fire safety technology, Siemens knows how fires work. After all, 100 years ago, we were among the first to provide innovative extinguishing solutions in combination with reliable fire detection technology. In fact, we have been further advancing fire safety technologies for 160 years.

Our innovative fire safety solutions are based on these many years of experience. Our solutions offer unique protection – integrated in a proven, comprehensive concept. For example, in combination with the most advanced fire detection systems, our Sinorix 227 extinguishing solutions provide optimal protection against risks of fire and allow fast, reliable extinguishing. You receive everything you need for comprehensive fire safety from one source.

And of course, your solution will be tailored to your specific applications and risks of fire, combined with a comprehensive service offering – from risk assessment, application support, system design, installation, and commissioning to maintenance and modernization.

All our solutions comply with national and international standards and regulations.

■ Typical applications

- Data centers and server rooms
- Telecommunication systems
- Electrical switching rooms
- Clean rooms
- Store rooms
- Control rooms

Highlights

- Comprehensive solution from a single source, from risk assessment to maintenance
- Highest flexibility in system design and setup
- Excellent extinguishing properties for fast, efficient extinguishing with no residue
- Optimum protection of electrical and electronic equipment, data, and other valuable assets





Sinorix 227 – a reliable solution for fast, efficient extinguishing

The earlier a fire can be prevented in areas with sensitive electronics, the better technical equipment and data are protected. Sinorix 227 works quickly and efficiently, so that sensitive technology is ideally protected from damaging, fire-related heat, and other toxic combustion products.

■ Fast and effective

The extinguishing agent is released especially quickly in the protected area, thanks to the high-pressure technology. It vaporizes quickly and completely, further accelerating extinguishing. In addition, Sinorix 227 can be linked with the latest fire detection systems from Siemens. The combination of the earliest possible fire detection and very fast extinguishing ensures that people and assets are protected to the fullest possible extent.

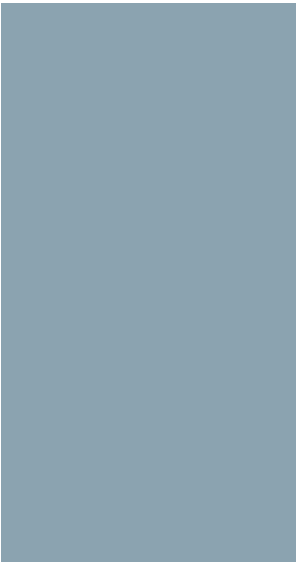
Since the extinguishing agent is stored as a liquid under pressure, only a few cylinders are needed. The high-pressure technology also allows the cylinders to be installed away from the protected room – therefore allowing central positioning of the cylinder battery.

■ High flexibility in use, with high-pressure technology

On the basis of the 42-bar technology, very large and complex piping networks can be realized with a centrally positioned cylinder battery. Moreover, with the respective cylinder batteries and sector valves, single-sector as well as multi-sector systems can be flexibly designed.

All this makes the system design highly flexible, so that Sinorix 227 extinguishing systems can be optimally tailored to a wide range of existing buildings, requirements, and risks of fire.

Thanks to the high-pressure technology from Siemens, Sinorix 227 reliably protects large areas. A VdS-tested and -approved software determines the ideal layout of the piping network, nozzles, ranges, discharge time, etc. This ensures safe and sustainable extinguishing.



In areas with sensitive technical equipment, Sinorix 227 extinguishing systems extinguish fires without impact on the valuable electronic and electrical systems.

Highlights

- Very fast flooding and extinguishing
- Efficient 42-bar technology from Siemens
- Compact, space-saving system
- Low installation and maintenance costs
- High design flexibility



Legend

- 1 Fire detection and extinguishing control panel
- 2 Fire detector
- 3 Aspirating smoke detector
- 4 Combined sounder beacon
- 5 Alarm sounder
- 6 Electrical manual actuator for extinguishing system
- 7 Emergency stop button for extinguishing system
- 8 Warning display
- 9 Sinorix 227 extinguishing agent cylinders
- 10 Piping network with nozzles
- 11 Overpressure flap



Sinorix 227 provides fast, efficient extinguishing without residues.

Highly effective extinguishing agent – reliable extinguishing

For extinguishing, Sinorix 227 uses the globally known chemical extinguishing agent HFC 227ea. It works by inhibiting the oxidation reactions between the combustible and the oxygen. In addition, it absorbs heat to cool the flame.

■ HFC 227ea – extinguishing with no side effects

HFC 227ea extinguishing agent is highly effective at low extinguishing concentrations, helping protect assets and people. It is chemically inert, has low electrical conductivity, and is therefore safe for electric and electronic equipment. The extinguishing concentration is harmless for people, so it can be used in occupied spaces as well. With an ozone depletion potential of 0, it has no influence on the ozone layer. HFC 227ea is thermally and chemically stable when stored.

■ Outstanding extinguishing properties and benefits

HFC 227ea is ideal for fire classes A (solids) and B (flammable liquids). It vaporizes quickly and completely during flooding of the protected area – without risk of critical concentrations of by-products after extinguishing. Therefore, HFC 227ea not only extinguishes fires quickly and reliably, but also without leaving any residue and without negative impact on the equipment. It also reduces the risk of expensive shut-down costs due to interruption of processes.

Highlights

- Ideal for fire classes A and B
- Non-conductive, non-corrosive, extinguishes without any residue
- Safe for assets, business processes, and people

Technical overview

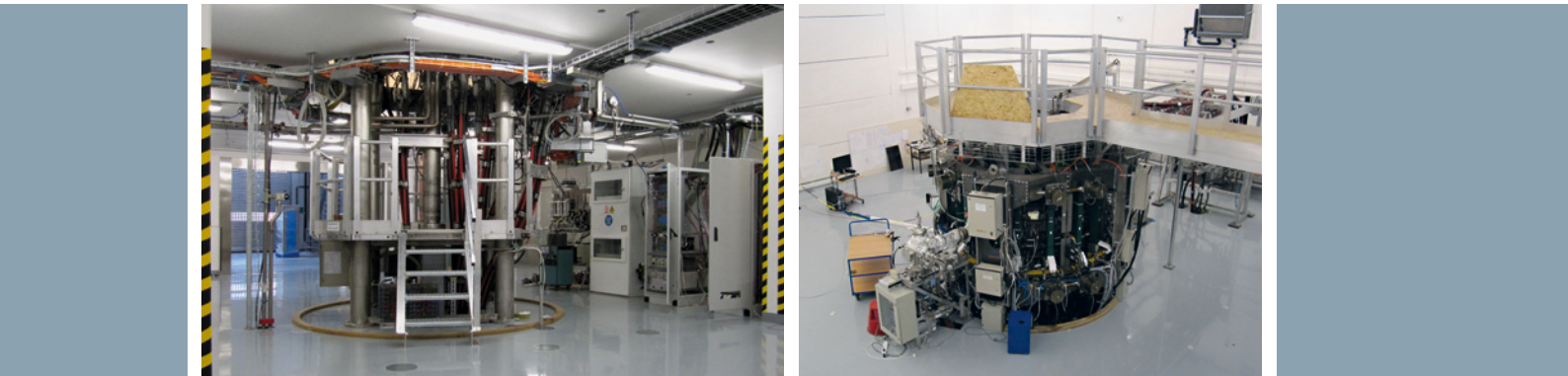
Sinorix 227 extinguishing solution	
Extinguishing agent	HFC 227ea
System	42-bar technology
Approvals	– VdS system approval – CNPP, LPCB
Environmental regulations	Not part of the Montreal Protocol
NOAEL (No Observed Adverse Effect Level)	9%
ODP (Ozone Depletion Potential)	0

Success story

■ **Academy of Sciences, Prague,
Czech Republic**

The Institute of Plasma Physics is a research institute of the Academy of Sciences in the Czech Republic and focuses on the field of plasma physics and application. The institute needed reliable detection and extinguishing for their COMPASS Tokamak – a machine that produces a toroidal magnetic field for confining a plasma.

To protect the data center that contains the highly valuable results from the costly experiments carried out on the COMPASS Tokamak, a Sinorix 227 extinguishing system was installed. The solution meets all requirements to safeguard the unique data.



Answers for infrastructure.

■ Megatrends driving the future

The megatrends – demographic change, urbanization, climate change, and globalization – are shaping the world today. These have an unprecedented impact on our lives and on vital sectors of our economy.

■ Innovative technologies to answer the associated toughest questions

Throughout a 160-year history of proven research and engineering talent, with more than 50,000 active patents, Siemens has continuously provided its customers with innovations in the areas of healthcare, energy, industry, and infrastructure – globally and locally.

■ Increase productivity and efficiency through complete building life cycle management

Building Technologies offers intelligent integrated solutions for industry, commercial and residential buildings, and public infrastructure. Over the entire facility's life cycle, our comprehensive and environmentally conscious portfolio of products, systems, solutions, and services for low-voltage power distribution and electrical installation technology, building automation, fire safety and security ensures the:

- optimum comfort and highest energy efficiency in buildings,
- safety and security for people, processes, and assets,
- increased business productivity.



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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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