

Comprehensive Fire Protection for Modern Data Centers

Protecting Lives, Assets, and Ensuring
Business Continuity



Mitigating fire risks for:

- Hyperscale
- (Wholesale) Colocation
- Enterprise
- Telecom / Edge

Comprehensive Fire Protection for Modern Data Centers

Recognizing and mitigating risks

With the growing reliance on processing of data, reliability has taken center stage. Considering high heat densities coupled with an abundant source of fuel and the potential that something can go wrong in these critical environments, fire protection is an essential element of risk mitigation. The concept should be comprehensive to protect life, assets and continuity of services.

Data centers are particularly prone to fire, given the high energy density and the nature of the materials present. The most common instigator of fire events in data center facilities are building systems. This includes but is not limited to electrical and mechanical systems. Bad housekeeping practices can also be a contributor.

To address the unique and dynamic challenges a risk-based integrated performance solution is essential for mitigating fire risks.

Effective fire protection

Data centers are comprised of many inter-dependent adjacencies, each contributing to the operational continuity of the facility. An event in any part of the facility can affect uptime objectives. A good design considers a holistic approach applying protection elements appropriate to the hazard.

Viking - your global fire protection partner with regional footprint - is uniquely equipped to provide the right solution, based on data center activity, operation and plant location.

Viking understands the challenges of modern data centres. Our partners, both local, independent fire contractors and the Global Engineering Support Services Center (GESSC), have specialized design & support engineers that have extensive experience in data center environments. Together, we will work jointly with you to tailor specific solutions, to meet every application challenge.

Where are the risks?

White space / Data hall:

- High energy densities
- Combustible materials
- Hot spots, due to inadequate cooling
- Manufacturing defects, mechanical damage, component degradation, and malfunctions
- High air movement
- Dark centers with limited staff to respond early on to developing events

Technical support areas:

- Overheating of technical equipment
- Short circuits
- Minor fires causing serious damage due to loss of control

Emergency power systems:

- Flammable electrolytes, oils, and carbon-based fuels
- Lubricating oil escaping through leaks
- Friction from mechanical systems

Administrative spaces:

- Defects in electrical device, e.g. computers, fans, etc.
- Short circuits in automatic (vending) machines, or kitchen fire

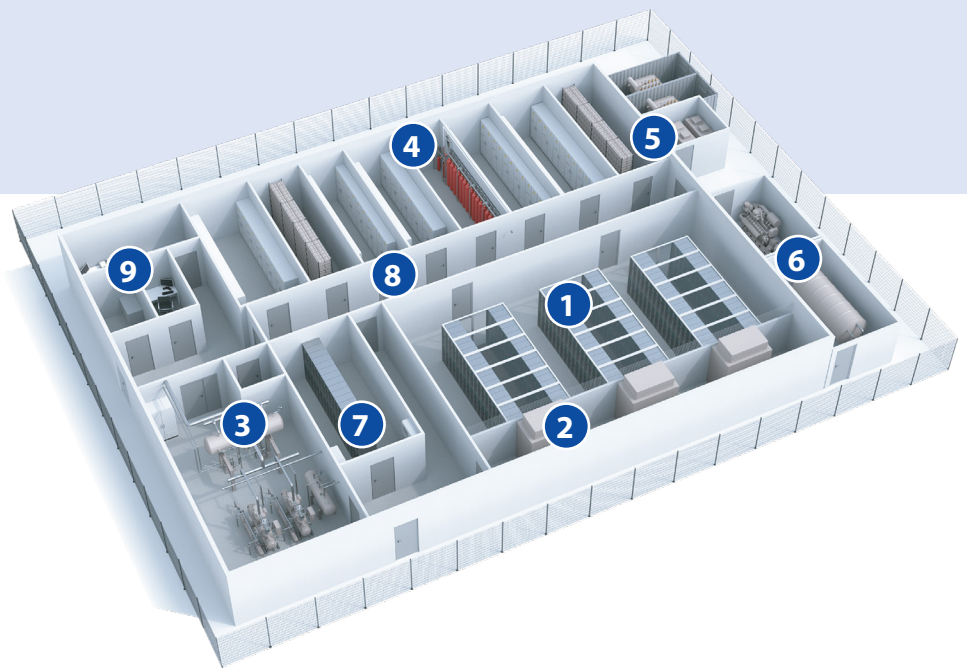
How Viking works with you










Viking is attentive to your data center requirements and proposes various suitable options in terms of fire protection solutions - you chose which route to go.

- Viking works closely with you and other stakeholders in the development of project specifications.
- Viking and its partners review design submittals as well as closeout submittals for compliance with specifications.
- GESSC provides comprehensive design support services for global programs respecting local fire protection standards and life safety codes and rules.
- Viking can support you in selecting qualified, local fire contractors for bidding, designing, installing, commissioning and maintenance.
- Viking supplies all required components to fire contractor.
- Viking's solutions encompass a broad range of innovative and proven system components for water, water mist and gas extinguishing systems as well as fire detection systems.
- Viking will go above and beyond of what you may expect from a global fire protection product manufacturer.

At Viking, our mission is to provide expertise and support from the start of your data center project, so to ensure that your data center runs without unnecessary interruption caused by fire.

We offer a recognized and complete line-up of leading technologies trusted by data centers around the world, conveniently accessible anywhere your projects take you.



		1	2	3	4	5	6	7	8	9
		White space / data hall	CRAH ¹ galleries	Mechanical spaces	Electrical rooms	UPS ² spaces	Generator enclosures	Modular structures	Corridors	Admin spaces
Release Control Panel		●	●	●	●	●	●	●	●	●
Aspirating Smoke Detection		●	●		●	●		●	●	
Spot-Type Smoke Detector				●	●	●		●	●	●
UniVario Heat Detector							●			
UniVario Triple IR Flame Detector							●			
Low Pressure Water Mist		●		●	●	●	●	●	●	●
Preaction Sprinkler System		●	●	●	●	●	●		●	●
Fendium polymer enhanced, corrosion resistant pipe		●	●	●	●	●	●	●	●	●
Clean Agent Suppression		●			●	●		●		

¹ CRAH = Computer room air handling

² UPS = Uninterrupted power supply

At Viking, we understand that the adequate fire protection solution depends on several factors, for example the data center type. An enterprise type with a hot aisle containment concept can apply different protection methods compared to a hyperscale non-compartmentalized hard floor data center.

[Contact us!](#)

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For further information, please contact your local Viking sales office or refer to the technical documentation.
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Photos

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