



**Novec™**

Brand

# The heat is off for GleSYS Datacentre in Sweden

An innovative culture is part of the company DNA at GleSYS data centre in Stockholm. In an agreement with Fortum, the largest power utility in Stockholm, they sell heat produced from cooling their data centres back into the district heating system. This 'circular economy' arrangement is a significant contributor to the 200 MW of power required to power Stockholm every year.

GleSYS started back in 1999 as a web-hotel with a server located in the US, but soon moved into new data centre facilities in Falkenberg, Sweden. Its innovative approach has been recognised with several awards including 'Business of the Year' in Falkenberg, and the 'Superföretag' ('Super Company') award from Swedish business magazine *Veckans Affärer*. Today GleSYS offers hosting as well as co-location services for its customers internationally.

## Protection of critical assets

Fire protection is of vital importance for GleSYS, to protect its critical assets and minimise downtime. Its modular data centre in Falkenberg features an inert gas system, which was already in place when the building was acquired in 2000. Since then, GleSYS has introduced fire extinguishing based on 3M™ Novec™ 1230 Fire Protection Fluid for its Stockholm facility. Joakim Jarstorp, Facility Manager for GleSYS has worked for the company since 2012 and explains why they selected Novec 1230 fluid as their extinguishing agent of choice:

"Based on discussions with at least three different suppliers of fire extinguishing systems, we found after careful review that Novec 1230 was the best fit for our facilities. A Novec 1230 system did not force us to install large pressure relief vents, which would have created a major challenge for the building design. The size of the Novec 1230 system allowed us flexibility in installation. In addition, there is no clean-up or contamination from the extinguishing media after system activation. The promise of rapid extinguishing was also a bonus, plus Novec 1230 fluid is not known to have any issues with hard drive crashes when activated."



Pictured: Joakim Jarstorp, Facility Manager at GleSYS, with the fire protection system at GleSYS Stockholm data centre



## Total cost of ownership

When it came to cost comparison of Novec 1230 and inert gas systems, for Joakim and GleSYS, it was important to take a longer term view: "We found the pricing to be quite similar between the Novec 1230 system and inert gas alternatives," said Joakim. "Although refill costs are higher with Novec 1230 when viewed on a kilogram basis, a larger inert gas system would take longer to refill and require more labour costs due to its relative size. If our fire protection system is down when being refilled, we need a security guard on watch 24/7 with a hand-held fire extinguisher. The longer the time taken to get the system up and running again, the higher the cost for the security service."

## System installation

Back in 2013, GleSYS opted to work with Exting AB as the installer of a Viking/Minimax® MX 1230 fire extinguishing system using Novec 1230 fluid. This was installed in Zone 1 of their data centre. In 2015 they added Zone 2, on the second floor of their building, where they again opted for Novec 1230. This time the supplier was DAFO AB, using the SAPPHIRE® system from Johnson Controls. In 2016 they decided

to develop the Zone 1 MX 1230 system by transforming it to a multi-zone variant, covering several areas with one central bank of cylinders.

## A sustainable future

GleSYS is now working on expanding its data centre with a third zone, and intends to continue its district heating arrangement with Fortum as a net producer of heat. Novec 1230 fluid is already selected for fire protection of Zone 3. The environmental profile of Novec 1230 fluid, with zero ozone depletion potential and low global warming potential, aligns well with GleSYS's focus on sustainability. Joakim explains: "We have already advanced the environmental discussion from cooling of the servers to provision of that heat back into one of the largest district heating networks in the world. This has contributed a huge 3824 MWH (Mega Watt Hours) of heating since installation in 2017. The future for data centres is definitely sustainable, and I wouldn't hesitate to recommend Novec 1230 systems for fire protection of data centres, based on my experience so far."

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3M™ Novec™ 1230 Fire Protection Fluid is an advanced clean agent fire suppression material, based on a proprietary chemistry from 3M. It was designed to address industry needs for clean agent fire protection that is safe and effective, while offering a sustainable environmental profile that no other halocarbon agent can match. This includes: Zero Ozone Depletion Potential; a 5-day atmospheric lifetime, and a Global Warming Potential of 1. Because of these properties, Novec 1230 fluid is not targeted for phase-down or regulatory restrictions anywhere in the world. It is approved for use in total flooding fire suppression systems by the U.S. EPA and most major regulatory bodies. All of this makes Novec 1230 fluid today's sustainable choice for clean agent fire protection.

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## The 3M™ Novec™ Brand Family

The Novec brand is the hallmark for a variety of proprietary 3M products. Although each has its own unique formula and performance properties, all 3M™ Novec™ products are designed in common to address the need for safe, effective, sustainable solutions in industry-specific applications. These include precision and electronics cleaning, heat transfer, fire protection, protective coatings, immersion cooling, advanced insulation media replacement solutions and several specialty chemical applications.

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3M™ Novec™ Engineered Fluids ■ 3M™ Novec™ Aerosol Cleaners ■ 3M™ Novec™ 1230 Fire Protection Fluid ■ 3M™ Novec™ Electronic Grade Coatings ■ 3M™ Novec™ Electronic Surfactants ■ 3M™ Novec™ Insulating Gases

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