

GEAFOL® Transformers for Data Center Applications

Ensuring reliability, security, and environmental sustainability

Our purpose is "We energize society"
and our employees stand for and work hard at this every day



The challenge

In a world driven by the Internet and data being stored in clouds, data centers play a crucial role for almost every aspect of our life. As the request for ever more online services continues to increase, the role of data centers in the energy world of tomorrow will be even bigger than it is today – as will their demand for transformers.

Data Center operators and respective infrastructures can have the need for transformers ranging from < 1,000 kVA up to 50,000kVA - thus requiring a solid and experienced partner for their transformer supply in that crucial environment, being able to deliver this range in ratings.



No matter in which area of a Data Center a transformer will be placed and no matter what rating & dimension – the transformer supplier has to ensure Reliability, Security and Environmental Sustainability

Reliability: As with transmission grids, provision of Data Center services have to be reliable – ever more so.

Security: Data as well as equipment have to be protected – GEAFOL® cast-resin transformers are flame-resistant and self-extinguishing, reducing the hazard level to nearly zero.

Environmental sustainability: With the target of humankind to preserve nature as best as possible, environmentally friendly solutions with exceptional product lifetime are essential.

The solution

This is why numerous globally active as well as country specific software-companies requested GEAFOL® cast-resin transformers for their projects of building either smaller Data Centers or hyperscale Data Centers all around the world. In the years 2019 to 2022 more than 2,000 GEAFOL® cast-resin transformers were delivered to Data Centers alone – thus contributing with our solutions to the ever-growing crucial infrastructure in this sector.

Data centers must deal with a number of different components in the grid, such as converters, USP devices and other power electronics elements. These units will have to deal with harmonics and therefore need to be designed for extra harmonic strength as well as for partial discharge. In many installations the combination of cast-resin transformers and vacuum circuit breakers (VCB) has been used successfully proving the transient behavior of vacuum circuit breakers with Siemens Energy's cast-resin transformers under real installation conditions. GEAFOL cast-resin transformers can be operated without the need for expensive RC-snubber circuits. Many decades in the field and comprehensive testing show overvoltage factors far below critical values and confirm the safe usage of vacuum circuit breakers with Siemens Energy's GEAFOL® cast-resin transformers.

Continuity ensured

Data Center operations is a crucial operation around the world. One of the main concerns is business continuity. When building an entire data center from scratch a great deal of responsibility is needed to provide high reliability, availability, security and environmental sustainability. So why should such a crucial industry depend on anything else but the best solution to uphold this responsibility?

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