

### **Green IT thanks to compliance with “Blue Angel” standards**

#### **Cooling systems based completely on water are an enormous challenge on the road to climate neutrality for data centres**

**Neunkirchen, 22<sup>nd</sup> March 2022. SCHÄFER IT-Systems, the specialist for data centre infrastructure, data centre cooling solutions and network technology, fully complies with “Blue Angel” requirements for the use of natural coolants in their entire edge computing system. On 11<sup>th</sup> and 12<sup>th</sup> May 2022 at the Data Centre World in Frankfurt in hall 3.1, stand D15, IT and data centre specialists can find out about this new iQdata cooling concept for the first time.**

The Europe-wide refrigerants directive has resulted in a comprehensive package of obligations for data centre operators. There are transitional periods for existing systems, but new systems may no longer be built using traditional refrigerants. So, it makes sense to plan future-proof new systems in keeping with Blue Angel requirements and aim to achieve certification. Mandatory requirements for a positive IT audit are energy-efficient cooling solutions without fluorocarbons (HFCs), an annual performance factor (APF) greater than eight and a power usage effectiveness (PUE) of less than 1.3. Schäfer IT-Systems took on the challenge of meeting these requirements in a trial set-up at the Betzdorf site in order to fulfil the “Blue Angel” criteria.

“The cooling system, which was built and tested together with our cooperation partner Efficient Energy, is a closed-loop concept made up of typical data centre components. The cooling system essentially consists of a side cooler, a cold water chiller and a free cooler set up as a complete system. For us, it was important to set the entire system up in a practical way and to actually determine the operating and efficiency values, the so-called free cooling,” explains Philipp Maibom, project manager and area sales manager West at SCHÄFER IT-Systems.

Dr. Dieter Thiel is a member of the Federal Environment Agency's "Blue Angel" expert group, and was involved in issuing the certificate of conformity, which confirms compliance with the "Blue Angel" criteria for air conditioning. He confirms that "the refrigeration system tested in laboratory operation meets all the requirements for the Blue Angel environmental certificate."

The test setup was based on the temperature profiles at the Frankfurt location. In various test scenarios, different ambient and rack temperatures were tested under a constant IT load. In addition to the known operating parameters of a data centre, very high air and water temperatures were tested within the normative limits and regulations. The results fully meet the criteria for energy efficiency.

## PRESS RELEASE

"Compared to previously used cooling solutions, the power consumption of our new climate control solution is two thirds lower, based on one year covering all four seasons. This also reduces the annual carbon dioxide footprint by almost 70 per cent. Compared to a traditional system, the investment pays for itself within three years of operation," says Thomas Wermke, Business Unit Director of SCHÄFER Interior Systems, who is also responsible for sales at SCHÄFER IT Systems.

As a specialist for rack-based cooling solutions, Schäfer IT-Systems, together with Efficient Energy GmbH, has proven that new standards in energy efficiency and sustainability are also possible for smaller data centres.

### Photo and caption:

Fig. 1: Testaufbau\_Bild-1\_(c)\_Schaefer-Werke-GmbH.jpg

Caption: Cooling system test setup as a circuit concept made up of typical data centres components.

### About SCHÄFER IT-Systems ([www.schaefer-it-systems.de](http://www.schaefer-it-systems.de)):

SCHÄFER IT-Systems, an innovative manufacturer of made-to-measure network and server cabinet and data centre solutions for both conventional and complex applications, is part of the internationally successful company SCHÄFER WERKE.

This owner-led enterprise is headquartered in Neunkirchen in Germany's Siegerland region and operates globally with diversified business areas: EMW Steel Service Centre, perforated sheets, fully recyclable standard and special containers in stainless steel and installations for data centres as well as workshops and factories. The work of all these divisions is based on high-quality fine steel sheet. The processing of this material is one of the core competencies of this enterprise.

### About Efficient Energy ([www.efficient-energy.de](http://www.efficient-energy.de)):

Efficient Energy GmbH is a German manufacturer and developer of environmentally friendly refrigeration technology. The company was founded in 2006 and currently employs around 70 people at its site in Feldkirchen near Munich. The medium-sized business is active throughout Europe and is pioneering clean cooling with its Bluezero® technology, using water as a refrigerant.

The eChiller uses pure water (R718) as a refrigerant and thus completely dispenses with fluorinated refrigerants. Efficient Energy helps its customers to meet the increasing regulatory challenges of refrigeration, such as carbon footprint, cost efficiency, F-gas regulation and price increases.

The company has received several awards for the eChiller, such as the European Business Award for the Environment 2018/2019, Red Herring Europe Top 100 2020 and Technology Fast 50 Award 2021.

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