

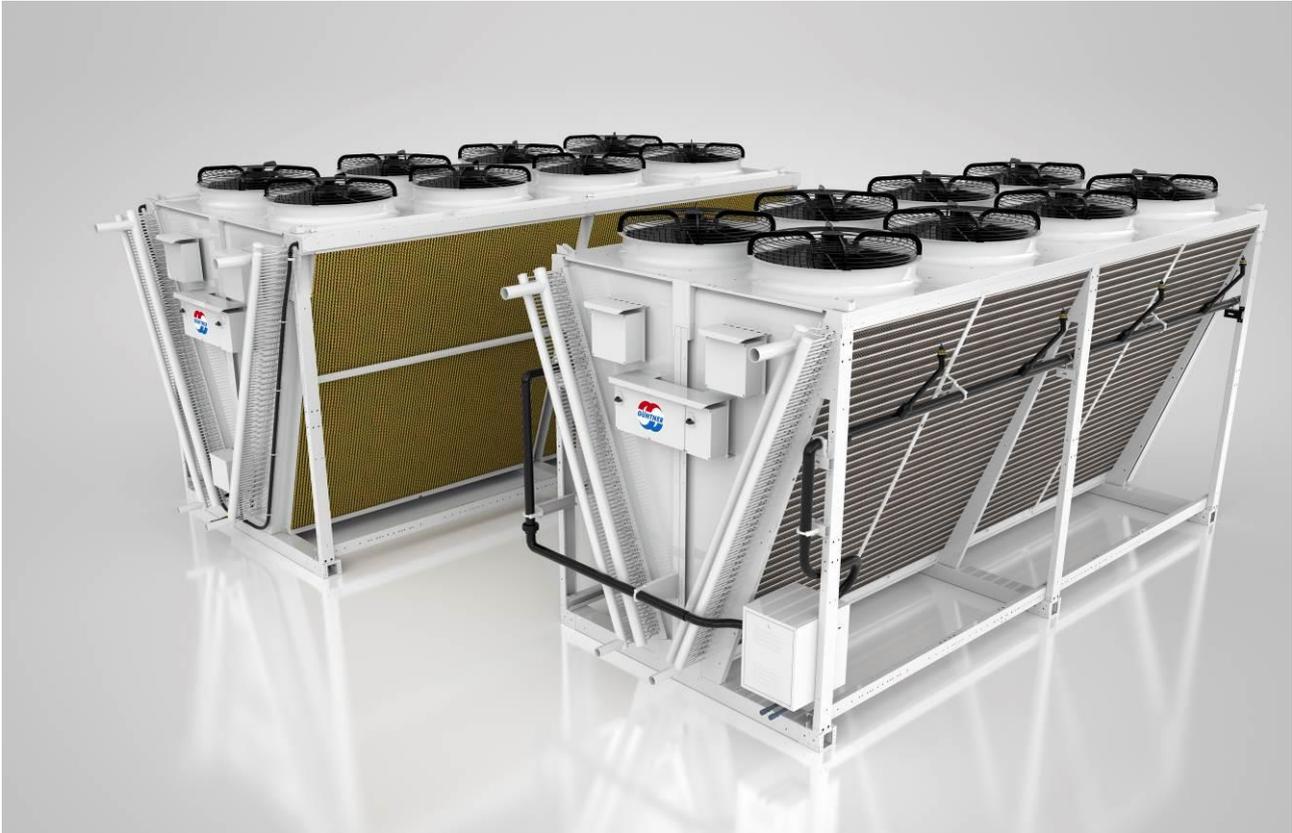
## Press release

Fürstenfeldbruck, October 2018



### Diversity in dry cooling applications: Güntner V-SHAPE Vario

Everything is possible with the Güntner V-SHAPE Vario: Condenser? Gas cooler? Fluid cooler? The great variety of individually configurable unit types offers a customized solution with standard units for any application.



#### Technically best solution

The precise configuration of a unit tailored to the requirements of the plant is performed quickly and reliably via GPC (Güntner Product Configurator). The wide modular variety of heat exchanger coils, sizes, fans and accessories allows the GPC to come up with such a perfectly tailored design. This results in a unit that is designed with pinpoint accuracy and offers reliable and durable quality in a capacity range of 75 kW to 2,100 kW for practically all applications. In addition to the conventional and new synthetic refrigerants, also the natural alternatives such as ammonia, CO<sub>2</sub>, hydrocarbons (e.g. propane) and water/glycol mixtures are of course selectable working fluids for the fluid coolers. The GGD gas cooler has a maximum operating pressure of 120 bar.

#### Low charge, low weight

On a technical level, the units were optimised in an impressive manner for operation with the respective fluids: The core tube diameters and materials, in combination with the fin geometries, provide the best possible combination of maximum capacity and minimum tube volume. The new condensers can thus notably contribute to reducing the refrigerant charge of a plant and its GWP. A lower charge can additionally contribute to minimising the number of required leak tightness tests according to the F-Gas Regulation. What's more, this also reduces weight.

#### High power density, extensive range of accessories

The V-coil design and minimum footprint make the V-SHAPE a high-capacity unit requiring little space. And the optional pre-cooling systems allow for increasing the capacity even further. The wide range of accessories is indeed worthy of the Vario product line: From control concepts adapted specifically for the unit to the optional AxITop diffuser for improved airflow routing at the fan outlet and reduced sound pressure



levels, the wide range of accessories allows to further adjust the unit to the respective conditions of the application.

### HydroSpray and HydroPad pre-cooling systems

Wet or dry – the customer decides. With the HydroSpray accessory, water can be sprayed directly on the heat exchanger. Evaporative cooling increases the driving temperature difference and improves the performance. Especially in refrigerating plants implementing free cooling, e.g. for the cooling of server racks, such systems result in considerable energy savings. It is possible to improve the COP by up to 40 % through using a spraying system in a refrigerating plant when there are high ambient temperatures and the spraying is used to lower the condensing temperature. Due to the increased performance effected by the spraying system, also smaller fluid coolers and condensers respectively could be used while maintaining the same fluid temperature. In each case, the specially developed controller Güntner Hydro Management GHM spray controls, in the Basic as well as Professional version, the water spraying depending on the performance required by the heat exchanger and on the ambient and fluid temperature and thereby saves energy and water. Energy and water are also saved by the second available pre-cooling system HydroPad, particularly when combined with the Güntner Hydro Management GHM pad that is optionally available as well. On request, this control decides continuously whether applying water or increasing the fan speed is more cost-effective. Thanks to the HydroPad accessory, the heat exchanger remains dry, which has a positive impact on the service life. Adiabatic pre-cooling is achieved by wetting the pad, making water treatment unnecessary. There is no recirculation, and the unit's operation is hygienic. The heat exchanger and the evaporative equipment are separated from one another so that the system does not fall within the scope of relevant national regulations.

### State-of-the-art control

In addition to the specially developed controls for the pre-cooling systems, also Motor Management Systems for the fans are available: The comprehensive solutions provide functions that are not only adapted specifically for refrigeration and air-conditioning applications but can also be integrated quickly and easily into the BMS. And the optional Master Panel as central communication interface even allows to group several units with different technologies together and to centrally connect them to the BMS.

### About Güntner

Based in Fürstentfeldbruck near Munich, Germany, Güntner GmbH & Co. KG is a world leader in the manufacture of refrigeration and air conditioning equipment components. With approx. 3,000 employees worldwide and production sites in Germany, Hungary, Romania, Indonesia, Mexico, Brazil and Russia, the company shows a strong presence for their partners in all markets. Decades of experience in the industry and the consistent integration of the latest technologies and research findings ensure the high-quality standard of Güntner solutions. The international areas of application comprise energy & process cooling projects, industrial and commercial applications in the field of food production and storage as well as HVAC applications for buildings and specific applications such as server room cooling.

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