

Menerga solution is awarded the German Data Center Award

The jury was convinced by Menerga's compact cooling units with evaporative cooling and outdoor air pre-cooling

As part of the Future Thinking trade fair for data centers, the expert jury awarded Menerga third place out of 13 submissions in the 2018 German Data Center Award for its innovative cooling systems, in the category Data Center air handling and cooling. The jury consisted of representatives from business, various professional associations, as well as research and teaching institutions.

Special Menerga functional characteristics stand out

The Menerga compact recirculation cooler with Adcoolair cooling system operates with indirect evaporative cooling. In the Adcoolair system, the humidified air flow that extracts the required heat is additionally precooled by the circulation water of the evaporative cooling system. This enables achieving supply-air temperatures below the wet-bulb temperature of the outdoor air – which is not possible with conventional evaporative cooling systems. This pure recirculation-air mode assures that external influences – such as pronounced temperature and humidity fluctuations, or pollution in the outdoor air – have no negative influence on the room air in the server room.

The reason for this specific implementation was the development for a customer of a compact unit for the lower to medium capacity range of 10 to 50 kW. These compact cooling systems can especially be employed in many existing data centers. Since these data centers often do not allow supply-air temperatures higher than 25 °C, Menerga has developed a system that enables supply-air temperatures lower than 23 °C throughout the entire year. This is possible with the aid of evaporative cooling and without the use of a conventional refrigeration unit.

Menerga sets new standards with its innovative technology

Menerga pre-cooling of the heat-removing air flow enables for the first time results of up to 3 K below the wet-bulb temperature of the outdoor air. Conventional systems can cool the air at the most only down to the wet-bulb temperature.

The added value of this innovation results not only from lower operational costs, on the basis of enhanced efficiency, but also and primarily from low maintenance costs in comparison to conventional cooling systems. This is because the elimination of a refrigeration system means that staff especially trained to handle refrigerants are not required for service and maintenance of the

Menerga unit. With respect to the F-Gas Regulation, this means a future-safe cooling system.

The technical design implemented by the system enables a number of outstanding characteristics that make it currently one of the highest-capacity systems based exclusively on evaporative cooling. Existing data centers especially profit from the relatively compact design of this efficient cooling unit – which can be integrated virtually without difficulty in small machine rooms. This is possible by the vertical configuration of the system design, with extract air at the top and supply air at the bottom – which makes effective ducting possible. The supply air, for example, can blow directly into a raised floor.

This means, to take one example, that such a Menerga cooling unit with a maximum of 13 kW cooling capacity, and maximum power consumption of 2.3 kW, will have dimensions of 1,620 x 730 x 2,790 mm (L x W x H).

And since the Adcoolair cooling system is made of non-corroding polypropylene, this cooling solution offers an especially long service life and great operational reliability. If the water is soft, it is even possible to do without water treatment, which likewise has positive results for operational costs.



Compact Menerga cooling units with evaporative cooling and outdoor air pre-cooling.

Photo: Menerga GmbH

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About Menerga

Menerga develops and manufactures innovative ventilation and air conditioning technology for diverse fields of application. We can safely claim that our technology is leading in all areas, and that we set the bench mark for efficiency and effectiveness. Our philosophy, "Creating a good indoor climate – through **Minimal ENERGY Application**," is something at which we have succeeded every single day since the company was founded in 1980.

Menerga annual sales earned by the end of the most recent fiscal year were approx. €49.8 million, and the company employed around 410 employees in Germany and approx. 700 employees worldwide during this time.

Since 2013 Menerga has been part of the internationally successful Systemair Group, which is a leading company in ventilation and air conditioning technology.

For more information on Menerga, please consult www.menerga.com

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