Press release

SunOyster 16 heat receives Solar Keymark certification

SunOyster Systems (SOS) receives solar thermal quality label and starts regular sales of the concentrating solar technology

Berlin/ Halstenbek, August 4th, 2021: Severe precipitation events in Germany and heat waves and fires in Southern Europe indicate that climate change is in full swing. In order to still achieve the 2-degree target of the Paris Climate Convention, we must push the energy transition. This includes in particular the heat transition, i.e. the decarbonization of the heating and cooling sector.

With the SunOyster 16 (SO16) heat, heat consumers now have another innovative product available to wake up the "sleeping giant" of solar heat supply: The parabolic mirrors of the SO16 track the sun bi-axially all day, concentrating direct sunlight onto a high-quality vacuum tube. In case of strong wind, the SunOyster automatically closes its mirrors into a secure flat position – just as an oyster closes its shell.

SunOyster Systems GmbH (SOS) has now received the Solar Keymark certification for the SO16 heat from DIN CERTCO, a company belonging to TÜV Rheinland. The Solar Keymark is a quality mark for solar thermal products based on the standards DIN EN 12975-1 and DIN EN ISO 9806. The tests were executed by the measurement institute CENER, near Pamplona in Northern Spain. They carried out laboratory tests and for example shot ice balls with a speed of 80 km/h at the glass parts. SOS also set up a test machine on the roof in spring of 2021. Here, the lab for example conducted a mechanical load test (photo), which simulates a snow or wind load. In parallel, the institute audited the production of SunOyster Systems which had just been certified by Intertek according to the ISO 9001 quality management system in June.

In particular, the solar testing lab measured the energy output of the SunOyster 16. This is around 8.5 kW at 850 W direct radiation, and around 10 kW at 1,000 W (the Concentrator Standard Testing Conditions - CTC). Based on the German location of Würzburg, the yield of a square meter of aperture surface for 25°C is 633 kWh of heat per year, and for 50°C it is 560 kWh. This means that the SunOyster will be included in the German list of products eligible for public grant. Customers for solar heating can then receive 30 to 45% subsidies on the system costs, and customers with process heat applications even 45 to 55%, leading to attractive project returns of the customers. The Solar Keymark certification also enables subsidies for customers in many other European countries. For example in Athens where the annual yield is up to 967 kWh. And this heat can be converted into cooling with the help of thermal chillers to make the present heat wave more bearable.

After nine years of development work, the complex solar system is now ready to perform outside of demo projects. Shareholder Dirk Ketelsen, entrepreneur in the wind power sector and manufacturer of light aircraft: "A milestone has been reached - now we are set to grow! Together with my Turkish partner, I am aiming at a license production of the SunOyster in Turkey." But there are also prospective licensees from other countries which have been waiting for the certificate.

While the SunOyster 16 is due to its circular footprint of 50 m² and its high energy output usually too large for the single-family home, it can be installed very well on larger residential buildings, commercial and industrial flat roofs, and open spaces. SOS has inquiries for the following projects which are now going into implementation:

- Apartment buildings for hot water supply and heating support;
- Commercial roofs of hotels, hospitals and retirement homes; here, the heat from the SunOyster will often be converted into cooling with the help of thermal chillers;
- district heating projects and
- Process heat applications in particular up to 100°C.

The SunOyster components are manufactured by specialized suppliers and shipped to customers from the SunOyster warehouse on the GreenTEC Campus in Enge-Sande in the very North of Germany. GreenTEC Campus initiator and SunOyster shareholder Marten Jensen: "The perfect team is sun and wind! We now want to place the certified SunOyster together with the certified small wind turbine EasyWind worldwide. We have just sold a first joint project to the Caribbean." The SunOyster is currently installed by SunOyster Systems' own installation teams. But it is not only in the Caribbean that distributors are interested in managing the installations on behalf of SOS.

Photos

1_SunOyster 16 in North Germany, in the pvplus version with 12 additional PV modules ©SOS.jpg

2_Dr. Carsten Corino, founder of SunOyster Systems, at 39°C loading the SO 16 heat at CENER, near Pamplona, Spain ©SOS.jpg

3_Mechanical load test of the front mirror of the SunOyster 16 at CENER near Pamplona, Spain ©SOS.jpg

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