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## HUBER TECHNOLOGY sp. z o.o.



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# HUBER Solar Active Dryers offer sustainable technology for maximum drying performance



A place in the sun – sludge drying with simple means



Increasing demand for large solar dryers – the method can reasonably be used also for huge sludge volumes

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Eco-friendly reduction of disposal costs - sludge drying in a greenhouse



Robust, powerful HUBER machines process even pasty sludge

## Also medium-sized and large plants increasingly use HUBER solar dryers

Previously, solar dryers were especially popular for use on small sewage treatment plants as they can reduce sludge volumes even with small throughputs. Meanwhile, however, also larger plants increasingly use this eco-friendly technology. Here are two installation examples where the HUBER SRT Solar Active Dryer is used successfully:

#### Start-up of solar sewage sludge dryer at Larnaca on Cyprus

A four-line HUBER SRT Solar Active Dryer has been put into operation on Cyprus, the sunny island in the Mediterranean. On a total gross area of 6,600 m², 12500 t press sludge with 20% DR are dried to a product with a DR in excess of 75%.

The installation of the HUBER SRT Solar Dryer is the first step of the complete modernisation of the Larnaca sewage treatment plant. Presently the dryer processes sludge that is produced by old outdated equipment so that the drying treatment process is quite a

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challenge. But the SRT dryer has no problems with the low dewatering results or with the high organics content and pasty consistency of the sludge to be processed. Due to the high variability of the system it is no problem to significantly reduce the generated sludge volume and produce a stable and easy to store granulate.

The sludge turners of the solar dryer are made of high-quality stainless steel (V4A). The dryer is fed with wheel loaders. The dry granulate is piled up in a huge storage area in the halls for up to half a year. Equipped with high-efficiency ventilators the solar dryer extracts the water from the sludge while consuming only little energy. The system is controlled via a mobile touch screen. The control panels are installed in a separate room.

In the near future, the customer wants to install a HUBER VRM® membrane plant and a new dewatering system to achieve about 10% higher drying results. The clarified effluent from the membrane plant can be used for the irrigation of green areas. In winter, the rainwater is sufficient for the flora so that the treated water can be stored in large lagoons but in summer each and every drop of freshwater is required. The dry granulate can be utilised as fertiliser..

#### Solar sewage sludge drying plant Bayreuth uses HUBER SRT system

The second installation example is a sewage treatment plant in Bavaria and one of the largest solar drying plants that exist. The technical equipment on site includes:

- Up to 1,000 kW additional heat from the nearby biogas plant
- Two-stage exhaust air treatment
- Fully automated feeding of dewatered sludge
- Fully automated removal of dry granulate
- 5 drying lines, machine size SRT 11, with approximately 7200 m² gross area
- Annual throughput: approximately 10,000 t press sludge per year

The contractors KG Nellingen succeeded in convincing the municipality Bayreuth and the engineering office Miller with their public tender offer for the complete sludge treatment line (including sludge dewatering). The quotation was worked out by Huber SE in cooperation with the contractor. When the submitted bids were evaluated the special benefits the HUBER system offers were of major importance:

- Sludge feeding and removal on the same gable side
- Optimal sludge aeration: up to 1,000 m³ per hour
- Backmixing of the partly dried sludge for optimal sludge granulation
- Processing of virtually the complete sludge bed (99% of bed width)

Due to the intelligently selected components we could guarantee competitive consumption values in our quotation and design a reasonable, economical plant concept for the operator. The construction work will be in full swing in summer 2014.

### Outlook

Solar sewage sludge drying has always been a reasonable solution for small wastewater treatment plants. But, under appropriate conditions, this technique can also be a recommendable option for large sewage treatment works. The simple, sustainable technology speaks for itself, and with the HUBER SRT system the customer gets maximum drying performance combined with reliable high-quality service.

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