

Press Release

October 5, 2012

Gildemeister Opened Energy Solutions Park in Germany

Our German collaboration partner Gildemeister has opened the energy solutions Park at their Bielefeld Plant in Germany on September 26, 2012 (Wednesday). Gildemeister will propose cutting-edge concepts of renewable energy generation, storage and supply for the manufacturing industry through the park.

The photovoltaic power generation system and the wind power generation equipment installed in the Bielefeld Plant have approximately one megawatt of installed capacity (equivalent to power required by about 220 German general households), and they are able to supply the Bielefeld Plant with up to 15% of its electricity demand. In the energy solutions Park, the green energy will also be supplied to the Machine Production, IT, Service and Design Departments during a power failure.

For the photovoltaic power generation, 13 units of the SunCarrier250, and 88 wings of the SunCarrier22, a new model, have been installed in an area of 20,000 m². Those products, which are solar trackers, improve power generation efficiency by up to 40% compared to fixed panels. For the wind power generation, four units of WindCarrier have been installed. All the energy generated by the whole system covers the peak demand and also is stored in three units of vanadium-based redox flow batteries, the CellCube, to supply electricity to the power charge station for electric vehicles. Vanadium-based redox flow batteries have 0.6 megawatt-hours of storage capacity. The stored green energy is supplied to electric vehicles through two power charge stations on the premises.

Gildemeister is one of the leading companies that generate renewable energy in-house for self-consumption. Prior to the system introduction, comprehensive analyses of energy efficiency and optimization of energy consumption were conducted at the Bielefeld Plant. Companies consuming large amounts of electricity should be able to contribute to changing today's energy policy by generating and consuming renewable energy in-house – that's the Gildemeister's way of thinking about future energy.



Photovoltaic power generation system
SunCarrier250 (top) and SunCarrier22 (bottom)



Wind power generation equipment, WindCarrier (left)
Vanadium-based redox flow battery (right)
CellCube FB 10-100 and FB200-400

Gildemeister energy solutions Park

Total output: 826.74 kWp

Annual power generation: 815,000 kWh

CO² reduction: 520,000 kg



Gildemeister energy solutions Park map

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| ① SunCarrier250x13 units | ⑦ CellCube FB 200-400x1 unit |
| ② SunCarrier22x88 wings | ⑧ Power charge station for electric vehicles |
| ③ SunCarrier Fixedx6 units | ⑨ Gildemeister group building |
| ④ Roof Systemx3 units | ⑩ Lightning in the parking |
| ⑤ WindCarrierx4 units | ⑪ Gildemeister IT building |
| ⑥ CellCube FB 10-100x2 units | ⑫ Gildemeister lathe plant |

