

## AKADEMIE MONT-CENIS

### *Building integrated PV system, Herne Germany*

The Akademie Mont-Cenis represents a modern masterpiece, symbolizing the structural change in the Ruhr area. It was built in close proximity to the former coal mine's pit Mont-Cenis in Sodingen, Herne. Internationally renowned architects Jourda & Perraudin's design seamlessly combines

Moreover, they regulate light and shade in a way that eliminates the need for energy-intensive climatisation.

The desired natural-sky effect was achieved by covering the roof with different types of modules and glass. As a result, not only



both innovative architecture and modern solar technology. The glass shell of over 12,000 square metres accommodates the North-Rhine Westphalia Interior Ministry's training facilities, the cone-shaped library building, and Herne's district town hall. The large outer shell (175 x 72 x 15 m) provides a mediterranean climate throughout the year. One of the largest solar energy systems of its kind was incorporated into the roof surface and the south-western facing elevations. Approximately 3,200 PV modules, covered with solar cells at various levels of density, generate environmentally friendly energy.

did it call for a great variety of PV modules, since different types of solar cells had to be used and their application density had to be varied, but, as the planners in charge of the 1 MWp PV generator's electrical concept, we faced technical challenges as well.

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Apart from the construction management, we also supervised the logistical coordination, which added a new dimension to our experience. Today, the Akademie Mont-Cenis is the centerpiece of the energy park Mont-Cenis.

Apart from the PV systems, Mont-Cenis also includes two combined heat and power plants, run by firedamp, which not only provide heating for homes in the surrounding area, but also support a 1.2 MWh storage battery.



### Grid connected PV system, integrated into roof and façade

System size:	1,000 kWp
Number of modules:	3,184 double glass modules
Type:	Type Pilkington, Optisol
Element size:	1.2 x 2.8 m, 1.16 x 2.4 m (façade)
Area of modules:	about 10,000 m <sup>2</sup>
Number of inverter modules:	569
Type:	Type SMA SWR 1500