

Wetland Roof for an Engineering Office in Jena, Germany



Control:

Central watering control with temperature sensor for frost cut-off.

Miscellaneous:

Automatic irrigation via 30 m³ rainwater cistern (with drinking water connection for emergency filling). Interposed heat exchanger (for ceiling heating in winter) is used for cooling in summer. Cooling of the offices in summer by about 10°C. Considerable savings in electricity costs and CO₂-emissions due to massive reduction of cooling current loads.

Wetland Roof in Jena, Germany

Employer:
Ingenieurbüro JenSys
In den Satteln 11
07616 Bürgel
Germany

Key words:
wetland roof for cooling of buildings

Type of building:
Office building

Roof surface:
120 m² (northern roof surface), 7° roof pitch
(pent roof)

Realization of Construction:
2014

Roof Construction:

1. Bitumen roofing membrane,
2. Bituminous sheeting (root protection sheeting)
3. [Rhizotech](#)-plant carrier and water storage mat (polyester flece)

Planting:
22 species from the genera Caltha, Carex, Filipendula, Gratiola, Iris, Juncus, Lysimachia, Lythrum, Mentha, Mimulus, Myosotis, Polygonum, Ranunculus, Scirpus and Valeriana, precultivated in a nursery for two years on the wetland roof mats.

