

ZEN® PVTwin

DATASHEET

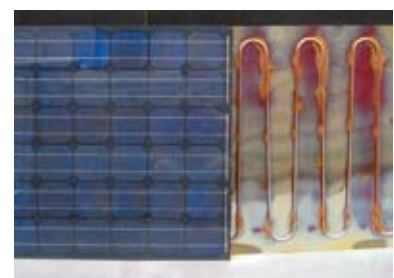
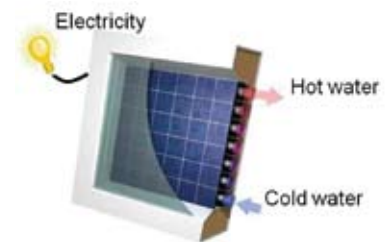
A ZEN® PVTwin system is a combination of photovoltaic cells with a solar thermal absorber, forming one device that converts solar radiation into electricity and heat simultaneously.

The excess heat generated in the PV cells is removed and converted into useful thermal energy. As a result, PVT absorbers generate **43% more solar energy per square meter** than a combination of separate photovoltaic panels and solar thermal collectors. In addition, the integration of the two functions in one device leads to **large potential savings** in material use and in production, balance-of-system and installation costs. This also gives PVT an aesthetic advantage: only one building element is required to produce both forms of solar energy, leading to a more homogeneous roof or façade appearance.

The PVT absorber can be applied in the residential, utility (care facilities), recreation (swimming pools, sanitary buildings) and agriculture market (crop drying).

PVTwin has been **operational since 2003** and since 2008 fully integrated in the ZEN® Renewables productline.

Standard sizes: 2,8 m² - 4,2 m². The PVTwin with extra glass-cover reach the same electric maximum power comparable with the conventional PV system and Solar heatingssystem. The uncovered PVTwin reach a higher outcome with the cooling of the PV cells.



Source: VDM Wöringen

Max. power/ profits p. year Solar electricity	ZEN® PVTwin S 2800	ZEN® PVTwin S 4200	ZEN® PVTwin V 4200
Max. power - covered	300 Wp	450 Wp	450 Wp
Power profits - covered (expected)	255 kWh/year	383 kWh/year	383 kWh/year
Max. power - uncovered	335 Wp	503 Wp	503 Wp
Power profits - uncovered (expected)	285 kWh/year	428 kWh/year	428 kWh/year
Max. power/ profits p. year Solar heating	ZEN® PVTwin S 2800	ZEN® PVTwin V 4200	ZEN® PVTwin V 4200
Thermal power - covered	1.535 W	2.300 W	2.300 W
Heat profits - covered (expected)	3,1 GJ/year	4,6 GJ/year	4,6 GJ/year
Thermal power - uncovered	1.350 W	2.000 W	2.000 W
Heat profits - uncovered (expected)	2,5 GJ/year	3,9 GJ/year	3,9 GJ/year
Specifications collector	ZEN® PVTwin S 2800	ZEN® PVTwin V 4200	ZEN® PVTwin V 4200
Size (all collectors: D = 105)	1.776 H / 1.751 W	1.776 H / 2.596 W	2.596 H / 1.776 W
Weight (empty) - covered	95 kg	144 kg	144 kg
Weight (empty) - uncovered	67 kg	103 kg	103 kg

Above: PV Twin (3 x 5,6 m²)
Middle: PV laminates (16,8 m²)

