

Roof tiles as solar power systems.

An option for all those wanting to produce and consume their own energy in future. And who love a beautiful look.

Solar power systems are becoming increasingly popular

There's no doubt about it: The future belongs to renewables. Particularly when generating electricity from sunlight. It's always easy to see who's using this energy source – the large-scale photovoltaic modules perched on top of many roofs are hard to miss. But this doesn't have to be the case: Solar roof tiles offer an alternative.

Solar roofs that you can't see

Solar roof tiles are the choice when, in addition to producing your own electricity, good taste and increased technical requirements for the roof surface are also on your wish list. After all, not everyone likes photovoltaic modules that are mounted on existing roofs with brackets and rails, and which in many cases neither blend in visually nor align with existing skylights, dormers or roof slopes. Solar roof tiles, on the other hand, can be harmoniously integrated into the overall appearance of any roof. Even listed buildings, for which photovoltaic systems are prohibited by building law, can be covered with solar roof tiles after receiving approval.

The favourable returns on your investment in terms of the benefits, aesthetics, safety and durability make solar roof tiles more than competitive relative to conventional, large-scale photovoltaic modules, and are reasons why increasingly more home owners are opting precisely for solar roof tiles.

Start your personal energy transition

Solar roof tiles therefore provide the new, safer and more attractive way to easily obtain a large part of your electricity needs from your own roof using the inexhaustible energy from the sun. During the summer months, a solar roof will almost completely cover your own electricity needs; in the winter, you draw part of your electricity from the grid. In combination with a suitable battery storage system, this reduces your electricity consumption from the grid and therefore cuts your electricity costs by about 70 per cent. Such a system doesn't pay for itself by means of a feed-in tariff, but solely through the savings on your electricity bill at the end of the year.

Solar roof tiles have many advantages

Solar roof tiles are almost visually indistinguishable from original tiles, they fit elegantly into any roof, and almost any roof tile is suitable. To produce them, either original tiles are used directly from the manufacturer or matching roof tiles are specially manufactured. The tiles and solar modules are bonded together to form robust components whose longevity corresponds to that of the original tiles, while the water drainage and impermeability are maintained.

A German manufacturer who has stood for these qualities since 2012 is autarq GmbH. autarq solar roof tiles can be laid like traditional roof tiles. No changes are necessary to the roof: The weight is approximately the same as the original tile, the roof's structural load-bearing capacity is not impaired, and the cables and plug contacts lie under the roof cladding and are therefore protected against the weather. In combination with the non-hazardous, protective extra-low voltage, autarq therefore offers the ideal product for renovation and new-build schemes.

You decide where it goes

In contrast to conventional modules, the autarq system is also immune to shading thanks to the parallel connections. Skylights, chimneys, ventilation pipes or TV aerials have little impact on the installation and operation of such systems. And apart from the north side, every square metre of a house roof can be used to generate electricity.

The size of the system is also determined by the home-owner – solar roof tiles covering a 30-40 square-metre area are often sufficient to produce the required electricity. If necessary, the system can also be expanded because it's modular. In addition, autarq systems operate in the safe, protective extra-low voltage range.

How autarq solar power systems arrive on your roof

autarq offers system solutions optimised to customer requirements. For this purpose, an employee takes all the necessary data on site, prepares a needs analysis and then submits a bespoke, non-binding quote for the custom-made solar roof tiles, cabling, electricity storage, inverter and energy manager.

Trained partners from the roofing trade install the solar roof tiles, lay the cable harnesses and then integrate the new solar roof tiles with the remaining roof tiles. autarq's installation concept for the solar roof tiles makes the planning much easier and enables it to be adapted flexibly to existing conditions during roofing. This allows the tradesmen to work as usual and respond to wishes from building owners. For smaller systems, the roof will already be sealed again the same evening.

The electrical work is then carried out, independently of the installation work on the roof, by a partner from the electrical trade, who installs the power storage unit, inverter and energy manager, and connects the system to the electricity grid.

Finally, autarq prepares documentation for the solar power system, including the technical operating instructions, and provides instruction about the functions and controls during the final acceptance or commissioning. In addition, autarq offers 5-year all-risks insurance and a 25-year performance guarantee.

Why self-sufficient with autarq?

If you're planning a new-build scheme or a roof renovation; if you want to use 100 per cent of your generated electricity yourself and thus reduce your electricity costs; if you want to reduce your personal energy footprint and thus take a significant step towards energy self-sufficiency: Then the autarq solution offers a convenient means for achieving your requirements regarding the aesthetics, safety and functionality, thus maintaining the value of your property.

An autarq solar roof will already generate electricity now at the same cost as electricity from the grid. And depending on the respective underlying framework conditions and the expected increases in the electricity price, such a roof will pay for itself in a few years and will then continue to generate electricity at zero cost for many years thereafter. So the investment pays off. In combination with a future-proof storage system and the infrastructure that is also included, such as energy managers, up to 70 per cent of the required electricity can be produced by the roof itself and self-consumed.

Furthermore, this aesthetically pleasing and safe energy concept also meets the increased requirements for energy efficient buildings and facilitates access to favourable loans and subsidies through EU funds or the KfW Bank.

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