Concepts that change the world

SUNFarm and POWERBox

Revolutionary power supply solutions for livestock buildings

www.bd-powersystems.de
Use the power of the sun

In many regions of the world, the successful keeping of livestock is very challenging. Insufficient energy supply and permanently increasing prices for electricity and diesel make an economic operation difficult. These obstacles are no longer insurmountable with our innovative SUNFarm and POWERBox.

Solar energy is free. Our extremely scalable, modular system lets you use this energy source to supply your farm reliably and securely with energy – even if you operate off grid. And best of all: Where the energy requirements for a good house climate are the highest due to high solar irradiation, the system amortizes the quickest.

Depending on the location and the general conditions, solar power provides up to 70 % of the required energy. Using a power storage unit increases this share and provides additional security. You can thus reduce your energy costs permanently by up to 40 % with SUNFarm or POWERBox. Our experts will be happy to provide you with a rough calculation based on your individual situation and make you an offer.
SUNFarm: The intelligent photovoltaic system

Your livestock buildings are connected to the mains, but you want to reduce your energy costs permanently? SUNFarm helps you achieve just that. We will install modern solar panels on your buildings. These panels also reduce the cooling loads thanks to the shadow they create. Intelligent load management connects the photovoltaic system with the technology inside the barn. You can use the generated solar power directly in the barn. As an option, any surplus can either be buffered in lithium-ion batteries or fed into the mains.

Application
› on-grid farms with maximum blackout times of 20 %

Technology
› robust photovoltaic cells and technology suitable for agriculture
› intelligent load management
› lithium-ion batteries (optional)

Service
› consulting and individual configuration
› turn-key assembly
› regular maintenance (optional)

System integration
› highest security due to ideal combination with feeding systems and other housing equipment from Big Dutchman
› seamless integration into the BigFarmNet management and control system
POWERBox: Full steam ahead

If your farm is often affected by blackouts or if no mains supply is available at all, our POWERBox is the perfect solution. In addition to the solar panels, we will install a compact container with lithium-ion batteries, two gensets and an intelligent control unit. With this system, you no longer have to depend on the public grid. Thanks to additional backup technology, energy supply for the essential functionalities of the barn can be ensured permanently. At the same time, the use of cost-efficient solar power reduces the amortization period.

**Application**
- off-grid farms
- on-grid farms with blackout times of more than 20%

**Technology**
- robust photovoltaic cells and technology suitable for agriculture
- compact container with two gensets, lithium-ion batteries and intelligent load management

**Service**
- consulting and individual configuration
- turn-key assembly
- regular maintenance (optional)

**System integration**
- highest security due to ideal combination with feeding systems and other housing equipment from Big Dutchman
- seamless integration into the BigFarmNet management and control system

**Available sizes**
- 9, 15, 24, 30, 40, 45, 60 and 100 KVA
Advantages

› significant and permanent reduction of energy costs by up to 40 percent
› short amortization periods between three and five years
› reliable energy supply irrespective of the location
› up to 70 percent of the total energy demand covered by the annual solar yield
› scalable thanks to modular design
› systems developed specifically for agriculture with maximum functional reliability
› intelligent energy management
› perfect combination with Big Dutchman housing equipment
› sustainable reduction of CO₂ emissions by up to 70 percent
› German know-how

Sample calculation
Kenya/Lodwar 100,000 layers
Annual electricity demand ........................................ 500,000 kWh
Electricity generation SUNFarm 100 kWp .................... approx. 162,000 kWh
Annual savings in electricity ..................................... approx. 32 %*
Amortization period ................................................. approx. 5 years

* at 100 % self-consumption of the solar power
Innovative solutions

Electricity generated from chicken manure or self-sufficient farms in the middle of nowhere: Our ideas for sustainable and efficient energy supply in agriculture know no bounds. A team of qualified and experienced engineers researches and develops new solutions that go beyond traditional approaches.

Customers all over the world benefit from our revolutionary systems. As a member of the Big Dutchman family, we can furthermore draw on a proven network of sales and service partners on all five continents and in more than 100 countries.