

Dynactiv™ Power – with integrated solar technology

A two-in-one solution that saves water and generates energy in semi-arid regions



Dynactiv™ Power

Division ContiTech of Continental AG

BK 10/10 (BN) Paper: 50% totally chlorine free cellulose (TFC) / 50% recycled paper



Retains up to **40%** more water



Installed capacity is approx. **500** kWp of eco-friendly solar-based electricity per 10,000m²



Has service life of **20** Years

The benefits of Dynactiv™ Power – with integrated solar technology

Water storage

- > Completely seals large areas of water
- > Prevents water from evaporating
- > Offers protection from algae growth and pollution
- > Enhances water quality
- > Reduces the cost of complex cleaning operations
- > Flexible, floating composite sheeting adjusts to suit current water levels

Electricity generation

- > Generates electricity independently of the grid and without fossil fuels
- > Utilises solar power to offer energy self-sufficiency to areas with little or no access to other energy sources
- > Supplies electricity for local drinking water processing plants, wastewater treatment, irrigation and livestock

System advantages

- > Dual-purpose land-use through combined water storage and energy production
- > Largely industrially prefabricated, with integrated thin-film modules
- > Especially quick and easy to install
- > Simple to use
- > Floats and is extremely resistant
- > Low operation and maintenance costs
- > Requires little technical effort to use
- > The ideal solution for state and private water supplies
- > Allows drinking and process water to be transported to remote areas through independently powered pump stations
- > Ideal for rural areas
- > Costs can be amortised through electricity meters, feed-in tariffs and water saved through non-evaporation



Dynactiv™ Surfaces

Dynactiv™ is a new premier product and services portfolio from Benecke-Kaliko AG that stands for dynamically active, innovative surface materials and outstanding solutions for a wide variety of industries.

Benecke-Kaliko is one of the world's leading specialists in surface innovation and an international partner for designers of contemporary surfaces and for producers of solutions for designated applications. With an expertise in development, design, and production extending worldwide, Benecke-Kaliko creates products with exceptional characteristics. In addition to abrasion resistance, opposition to UV light rays, and high scratch resistance, Benecke-Kaliko materials uniquely offer superiority in eco-friendliness, weight optimization, appearance, and haptics in terms of grip and touch.

The Dynactiv™ Surfaces portfolio comprises of eight different product groups classified by industry: Hospitality, Health, Home, Fashion, Mobility, Protection, Power and Blend.

Learn more about the contents of this brochure



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Self-sustaining electricity and water supplies

Reservoir cover sheeting with integrated solar cells

Being largely industrially prefabricated, Dynactiv™ Power is especially quick and easy to install at its point of use.

Dynactiv™ Power – with integrated solar technology is sustainable and forward-looking two respects: in hot, dry climates the opaque, multi-functional reservoir cover sheeting seals large areas of water completely, protecting them from pollution and preventing them from evaporating. At the same time, photovoltaic modules integrated into the sheeting convert solar energy into electricity.

In semi-arid regions water reservoirs form a part of the established infrastructure, serving as hydraulic buffers and connecting pipe systems. Dynactiv™ Power now minimises the amount of water lost through evaporation in water masses with an area of up to 100,000m². This flexible covering retains up to 40 percent more water, which can then be used to irrigate corresponding amounts of land for agriculture. In addition, the system's integrated photovoltaic modules provide solar energy that can be used to power nearby households or pump stations. The composite foil produces up to 5 MWp of electricity, not only compensating for deficits in the power supply but also alleviating shortages of water.

High degree of prefabrication for particularly simple installation

Being largely industrially prefabricated, Dynactiv™ Power is especially quick and easy to install at its point of use, requiring just an excavator to dig the reservoir. It also manages without expensive, complex concreting and requires no metal storage tanks or major construction sites. The system is simply laid out on-site in 25-metre long, 1.7-metre wide sheets, which are then connected to each other. The tear-resistant sheeting is robust enough to carry the weight of a person or vehicle, making maintenance work easy to carry out. In this highly sophisticated form, this dual technology is unique.

Wind and sand have virtually no impact on the flat modules of the sheeting as their horizontal position considerably reduces the force of the wind across their surface, which can measure up to 100,000m². With a service life of twenty years, the system is definitely a worthwhile investment. In line with industry standards, the launch of the photovoltaic system must be overseen by a supervisor, but Dynactiv™ Power requires no involvement on the part of central planning authorities.

Efficient with double the benefits: Dynactiv™ Power is the first system of its kind to combine water conservation with climate-friendly energy generation.

Adding value for people, the environment and the climate

Large parts of our planet lack energy and water – and yet potable and process water and electricity are of key importance to social and economic development, agriculture, hygiene, business and education as well as practical training. Demand for non-grid water and electricity supplies is huge, especially in areas with little rainfall. With Dynactiv™ Power – with integrated solar technology, local technical infrastructures can now begin to grow. The system supports independent initiatives and self-sufficiency. The more a local community regulates its own water and energy supplies, the greater its financial independence from upstream administrative organisations.

Thanks to its capacity to generate electricity from solar energy, this market-ready system also helps to protect the environment and climate. Its composite foil produces no emissions that could contaminate either the water or the air. At the end of its service life, the entire area of sheeting, including its photovoltaic elements, can simply be rolled up and taken away. As well as being low-maintenance, Dynactiv™ Power – with integrated solar technology is completely recyclable.

The Benecke-Kaliko Group

The Benecke-Kaliko Group is one of eight business units in the ContiTech Division and part of one of the largest automotive suppliers in the world, Continental AG. This name stands for skill, innovation and reliability. In addition to our broad automotive product portfolio of premier solutions for high-quality vehicle interior surfaces, we offer Dynactiv™ surface solutions for the benefit of many other industries from hospitality, health, home décor and fashion to mobility, power, and protection. Moreover, our global development skills, expertise, and diverse and creative solutions contribute significantly to progress around the world, improving living standards and enhancing sustainability everywhere.

DYNACTIV™
Surfaces

Dynactiv™
Power



A reservoir is dug and lined with protective sheeting



The reservoir is filled with water



The reservoir is covered with sheeting



Dynactiv™ Power is rolled out on top