



KINEXT

ACCELERATE

GROWTH

ADVANCED STORAGE TECHNOLOGY TO OPTIMIZE ENERGY GENERATION, TRANSPORTATION, DISTRIBUTION AND USE

## **KINEXT ACCELERATES GROWTH AMBITIONS**

Upgrading an existing grid connection often imposes lead times up to several years, impairing the planning process and the expansion of site activities. KINEXT Energy Storage offers the solution by adding the ability to store large amounts of energy on-site, in kinetic form. The KINEXT high power discharge and exceptionally fast response time allows smoothing out peak demands from the cranes, resulting in a lower power profile. After discharge, KINEXT gradually recharges from the grid and by using braking energy from the cranes. The result is KINEXT enabling site expansion without an obligatory grid connection upgrade.

### **KINEXT ENERGY STORAGE**

|                         |                            |
|-------------------------|----------------------------|
| <b>Technology</b>       | Flywheel                   |
| <b>Capacity</b>         | 30 kWh                     |
| <b>Stand-By Loss</b>    | 7 %/hr                     |
| <b>Power Capacity</b>   | Modular, 0,1 – 1 MW        |
| <b>Cycle Efficiency</b> | 92 %                       |
| <b>Response Time</b>    | < 20 ms                    |
| <b>Lifetime</b>         | 20 years/1.000.000+ cycles |
| <b>Footprint</b>        | 4 x 4 meters               |

### **APPLICATION EXAMPLE**

- A terminal wants to expand its activities and take additional cranes in operation, but is hindered by the lead times of the grid upgrades.
- Waiting times for grid upgrades can be over a year, or even longer.
- Hoisting loads demands a large peak power, which can be fully covered by energy stored in KINEXT.
- Energy created when the crane lowers a load, which is usually dissipated in load banks or fed to the grid, is now stored in KINEXT for re-use in the next activity of the crane.
- As KINEXT shaves the peaks in the terminal's power profile, an expanded grid connection is no longer necessary.
- The expansion of the site with additional cranes is now possible without the delays and costs associated with a grid connection upgrade.

KINEXT uses proven flywheel technology to power scalable energy storage solutions that increase operational efficiency. Whether its primary application is peak shaving, increasing network stability and power quality, or UPS: KINEXT saves costs by optimizing the grid connection demand and efficiency, production uptime, equipment lifetime, residual energy recycling while integrating sustainable sources and limiting on-site emissions.

KINEXT can be installed in a matter of weeks.  
Would you like to know more? Contact our team to discuss your application today.

Please call **+31 (0)10 742 0840** or visit  
**S4-ENERGY.COM**

## **KINEXT BENEFITS**

- No grid upgrade needed with site expansion.
- No investment in cables nor transformers.
- No reactive power feed to the grid.
- Return on investment < 2 years.
- Energy savings through recuperation.

