ERS 2G

plug & save

Stores the energy wasted by the elevator when motor brakes to return it in the next consumption trip. Energy savings up to 70% with no harmonic distortion and no added stand-by consumption with a simple two-wire connection to any drive.

ENERGY RECOVERY SYSTEM FOR LIFTS

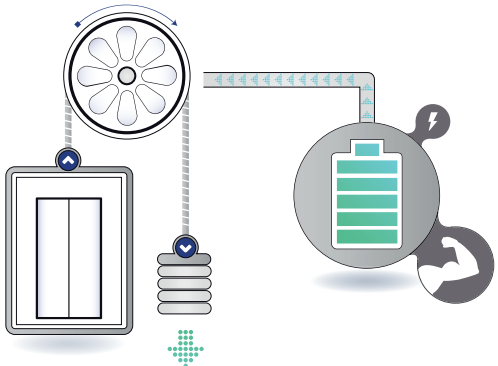
by epic power

ADVANTAGES

- **Recovers and stores the energy generated** by the elevator to return it in the next consumption trip or to support the drive's standby.
- **No regeneration to the grid**. No harmonic problems.
- Granting improvement of the **efficiency classification** of the lift.
- Elevator actually consumes less energy from mains.
- Very simple two-wire connection to **any drive, new or existing**.

What is it?

- **Bidirectional high-efficiency DC/DC converter** integrating energy storage module of **ultracapacitors**.
- Very simple connection of ERS 2G to any VVVF drive is enough to transform the elevator to a **regenerative** one with storage.
- Only the connection to DC link of the drive is enough for the system to **automatically store** the energy in the supercapacitors when generated and return it when there is a consumption.
- **Supercapacitor** modules offer better power density and cycling features than batteries. Therefore, they are the best possible solution **for fast charging and discharging applications** such as in elevators.
- **Ultracapacitors require no maintenance**.
- **Simple** integration both in **new or existing** elevators with no need for replacements.



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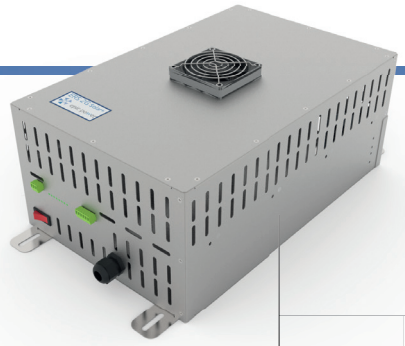
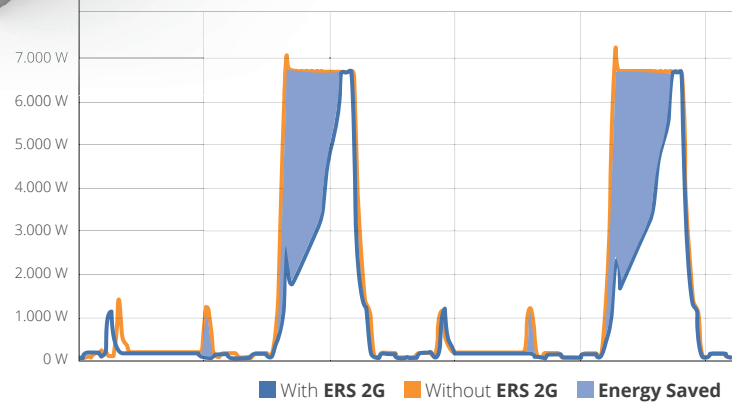


One single system achieves **energy savings up to 70%.**



Measurable and accessible energy savings.

Data obtained in a real elevator before and after installing ERS 2G.

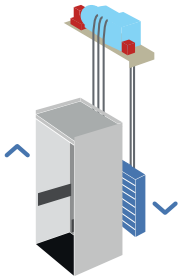
How is energy generated?

In electric traction elevators that include VVVF drives, also known as inverters, the generated energy is wasted in the form of heat in a braking resistor.

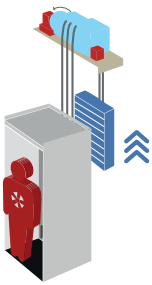
ERS 2G is capable of storing this energy to return it to the same elevator thus reducing the consumption in the next trip or, if there is no immediate trip, supplying the standby energy of the drive until the energy stored is depleted.

The new ERS 2G it revolutionizes how an elevator consumes energy because the elevator actually **demands less energy from mains**. This is not the case with regenerative drives, with which the elevator consumes the same and then returns to the grid. Saved energy is **measurable** and can be communicated via CAN bus under request.

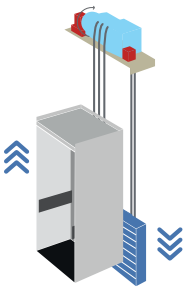
In a typical elevator, the cabin is counterweighted. When the counterweight goes down, the cabin goes up and vice versa.



When the cabin goes down loaded, it weights more than the counterweight so the cabin goes down by effect of gravity and the elevator motor acts as a brake, generating energy



The same thing happens when the cabin goes up unloaded; in that case the counterweight is heavier, gravity moves it down and the motor generates energy again in the same way a dynamo does.



Technical features

Available solutions for all types of loads and travel distances

	ERS 2G	ERS 2G x n (paralelizable)
Optimum for lifts	Up to 15 kW	Up to 15 kW x n
Stored energy	60000 Ws	60000 Ws x n
Nominal power	6300 W	6300 W x n
Efficiency	Up to 98%	
Standby	< 2 W	

ABOUT ERS 2G

- Easily transformation of any elevator into a **regenerative one**.
- **Up to 70% savings of the energy** consumed by the motor.
- Suitable for new or existing elevators.
- **Improves energy classification of the lift**.

ABOUT US

Designing, developing and manufacturing very efficient high power converters since 2009.

epic power is a key power electronics partner for energy efficiency and energy storage solutions:

- Flexible systems
- Customized designs
- Experienced engineering support

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