



ATEPS Nederland BV

Advanced Technologies for Energy & Power Systems

Solutions For Energy Storage

ATEPS focuses on the design and construction of battery-based energy storage solutions.

We have Systems that starts in a range from 2.5kWh (home storage systems) to larger container systems with a voltage up to > 1MWh.

The open structure of our systems ensures the further adjustments in rapidly changing energy markets can be easily implanted.



ATEPS PWR Booster™

Electric energy generation plants are best served by a constant flow of energy without peaks and changes so the generation plant can deliver constant power without the need to adjust to changing demand.

That is why in many countries there is a hefty penalty for higher than average demand that can in many cases be much more expensive than the kWh charges.

Also the contracted amount of energy might not sufficient for some applications, requiring an upgrade of the connection. With the high demand for electricity, planning of these upgrades can be difficult while such upgrades in hired locations can incur considerable costs for either the location's owner or renter.

For these and similar application, ATEPS has developed a modular peak shaving unit that is able to automatically add power to the wall-socket's power. By measuring the current coming from the wall socket with a very fast device, overload of this socket is prevented while the converter adds power to the one or two outgoing connectors. Once the peak is no longer present, the batteries automatically recharge for the next application.

The systems is based around a 30kW converter that is controlled by ATEPS Master Controller that interfaces to the batteries, the converter and the measurement devices.

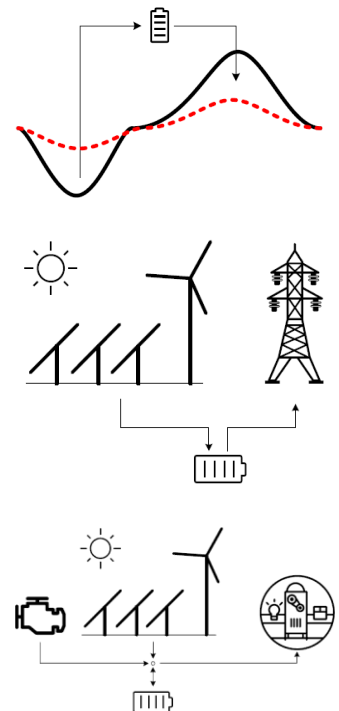
Additional power can be added by upgrading the system with up to 3 additional converters and battery set delivering 120kW of peak power. Battery capacity can be added in steps of 32,5kWh housed in a 19" cabinet and fully controlled by the Master Controller.

Typical Applications:

- Shaving peaks during machine start-up
- Charge buffers for EV-charging with PV-optimisation
- Reduction of contracted grid-cost
- Peak-power supply in combination with fuel-cell and diesel generators
- Optimisation of grid power usage

Combinations:

Almost all the above deployment areas can be combined to further optimize energy consumption and/or commercial objectives. For this, ATEPS uses an advanced Master Controller that monitors the energy flows and can adjust energy flows where necessary. Links to various remote SCADA, BIM and energy traders make it possible to integrate the ATEPS systems in order to configure fully integrated, large scale, systems.



ESS Project Planning

Important to notice of any ESS project is a clear understanding of the current operational cost and the cost of ownership. Using advanced analytical tools, a prediction on obtainable cost savings are made that will form the basis for the Return on Investment calculations.

The ESS system can be combined with different possibilities such as solar installations and wind generators.

More information:



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ATEPS PWR Booster™ Specifications

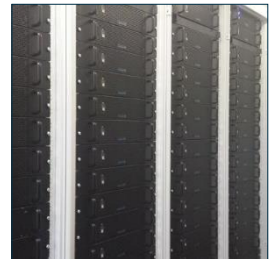
Type number	AT- PB001
CONVERTER	
Nom. power	30KW
Peak power	105%-115% 10min 115%-125% 1min 125%-150% 200ms
AC Connection	400Vac +/- 10%, + N + PE
Net Frequency	50Hz (59.5Hz-60,5Hz)
Cooling	Forced air cooling
Reaction speed	From stand-by to full power: <200mSec 100% load > 100% unload: 80mSec 100% unload > 100% load: 80mSec
CEC Efficiency	96,5%
Max. Efficiency	97,3%
Noise production	<65dB
Safety	Min/max AC Voltage, Frequency, battery voltage, max. power, temperature
BATTERIES	
Storage capacity	35kWh
Technology	Li-Ion NMC
Total modules needed for 1 power booster	13 * 19 inch module
Cooling	1 x
SIZES	
Measurments	600x700x1800mm (Length Width Height)
weight	Ca. 540kg



Each cell individually fused



19" batteries



Batteries in 19" racks



Connection:

