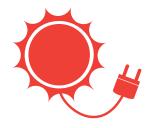


The use of batteries for large-scale storage of (renewable) energy in industry and related sectors has been on the rise in recent years. This under the influence of **rising energy prices**, **power shortages due to large consumers** and a **growing ecological awareness**. These batteries are recovered in the following three areas:



The surplus energy production is stored and later used in case of shortages. This increases the self-consumption of the company and less energy is injected and taken from the grid. This **increase in self-consumption is the battery's main profit factor**.

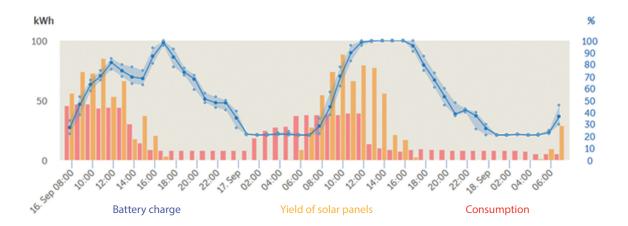
Companies are heavily penalized financially for their **peak consumption**. A battery controlled by an intelligent EMS (Energy Management System) can smooth out these peaks (**peak-shaving**). In this way, you can save on your energy bill without having to change your operation/behavior.





The **variable energy prices** (arbitrage) react very erratically in function of the general consumption but also in function of the presence of sun and wind. The battery can store **cheap energy from the grid and its own production** to consume itself at peak times when energy is again more expensive.

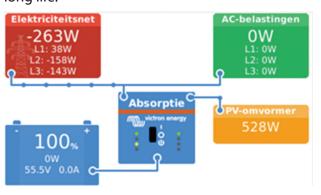




#### **AUTONOMOUS AND AUTOMATED**

Thanks to the automated operation of our system, our installations are completely **maintenance free**. You can monitor your entire system via a handy app on your smartphone or PC. You don't have to do anything yourself to save on your energy bill!

The temperature of the batteries is automatically kept stable thanks to a built-in climate control. In combination with our specially designed cabinet, this provides optimal conditions to guarantee a long life.



# **ENERGY MANAGEMENT SYSTEM**

In addition to a pure technical controller named AQ-Smart® Multi-EnergyRack, we offer additional options to optimize the battery and achieve faster payback. We recommend upgrading to an intelligent controller. On the one hand, you can implement the AQ-Smart® Dynamic and Multi-EnergyRack controls to take advantage of Day-Ahead pricing. In cooperation with any variable energy contract, this control via the Internet link will ensure additional optimization. If you want to fully optimize battery control and reduce payback time, we recommend the AQ-Smart® Yuso® Inside, Dynamic and Multi-EnergyRack as the absolute ultimate. This regulates battery charging and discharging

**via algorithms** based on energy prices, weather forecast and its own consumption pattern. The AQ-Smart



Yuso® Inside control works in conjunction with an energy contract through aggregator Yuso® and combines Day-Ahead prices with imbalance market opportunities.

# PYLONTECH IS THE LEADING BRAND FOR ENERGY STORAGE ALSO POSSIBLE AT 3X230V!





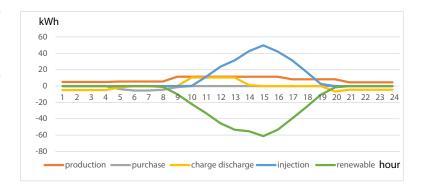
#### YOUR BATTERY SYSTEM FULLY CUSTOMIZED!

Thanks to the modular structure of our Pylontech® EnergyRack, many different configurations are available ranging from 5 - 15 - 20 - 29 - 48 - 77 - ... kWh.

Our batteries are supplied with matching industrial inverters that are perfectly dimensioned for the installation. The possibilities are listed at the bottom of this brochure.

#### **SIMULATION TOOL**

Installing an industrially balanced energy storage system is our main concern. through our **simulation tool** Battery Supplies is able, provided some parameters, to quickly answer the **correct sizing of the battery and inverters**. Using the simulation we show the **real yields and payback time**, linked to market representative energy tariffs and energy yields. Here we take into account PV and possible wind turbine production, consumption profile and



local specific situations. In the report you will find the savings on self-consumption, peak consumption, possible additional savings when using dynamic tariffs and savings on the imbalance market.





# TECHNICAL DATA

	5 kWh	15 kWh	20 kWh	29 kWh	48 kWh	77 kWh				
Technology	Li-Ion (LiFePO4 or LFP)									
Battery Module	PylonTech® US5000 - 4,8kWh - 48V									
No. of modules	1	3	4	6	10	16				
Nominal voltage (V)	48									
Nominal capacity (Ah)	100	300	400	600	1000	1600				
Capacity (Wh)	4800	14400	19200	28800	48000	76800				
Power (kW)	3840	11520	15360	23040	38400	61440				
Dimensions (mm)	442 x 420 x 161	600 x 600 x 700	585 x 510 x 860	660 x 650 x 2185	660 x 650 x 2185	1320 x 650 x 1985				
Weight (kg)	39,7	147,5 ± 1%	190,8 ± 1%	358,6 ± 2%	517,4 ± 2%	864,4 ± 2%				
D.O.D. (%)	95									
Cycle Life	> 8000 @ 25°C									
Communications Port	RS485, CAN									
Warranty	10 year									

# **CHARGE AND DISCHARGE TABLES**

# CHARGE POWER (KW) - CHARGE TIME (H) RELATIVE TO BATTERY SIZE (KWH) AT 25°C

Art	Descr.	Victron Productrange	kW	"In combination with PylonTech® EnergyRack"							
				15	20	29	48	77	153	230	300
SOL/VIC3R3T1	Converter kit 3x 3kVA	Multiplus II	5,376	2,8	3,7	5,4					
SOL/VIC3R5T1	Converter kit 3x 5kVA	Multiplus II	10,752			2,7	4,5				
SOL/VIC3R8T1	Converter kit 3x 8kVA	Quattro	16,896				2,8	4,6			
SOL/VIC3R10T1	Converter kit 3x 10kVA	Quattro	21,504					3,6			
SOL/VIC6R8T2	Converter kit 6x 8kVA	Quattro	33,792						4,5		
SOL/VIC9R8T3	Converter kit 9x 8kVA	Quattro	50,688							4,5	
SOL/VIC12R8T4	Converter kit 12x 8kVA	Quattro	67,584								4,4

# DISCHARGE POWER (KW) - DISCHARGE TIME (H) IN RELATION TO BATTERY SIZE (KWH) AT 25°C

Art	Descr.	Victron Productrange	kW	"In combination with PylonTech® EnergyRack"								
				15	20	29	48	77	153	230	300	
SOL/VIC3R3T1	Converter kit 3x 3kVA	Multiplus II	7,2	2,1	2,8	4,0						
SOL/VIC3R5T1	Converter kit 3x 5kVA	Multiplus II	12			2,4	4,0					
SOL/VIC3R8T1	Converter kit 3x 8kVA	Quattro	19,2				2,5	4,0				
SOL/VIC3R10T1	Converter kit 3x 10kVA	Quattro	24					3,2				
SOL/VIC6R8T2	Converter kit 6x 8kVA	Quattro	38,4						4,0			
SOL/VIC9R8T3	Converter kit 9x 8kVA	Quattro	57,6							4,0		
SOL/VIC12R8T4	Converter kit 12x 8kVA	Quattro	76,8								3,9	



