



TPS-E POWER STORAGE

The all-rounder for grids and industry

TESVOLT
THE ENERGY STORAGE EXPERTS



APPLICATIONS*

- **Diesel hybrid optimisation:** Diesel hybrid systems can be optimised for consumption with this system.
- **Off-grid power supply:** Create your own power grid, for example in combination with a photovoltaic system.
- **Peak shaving:** Cap your consumption peaks and save money thanks to lower output use.
- **Self-consumption optimisation:** Use more of the power you have generated.
- **Grid system services:** Manage frequency, effective and reactive power and balance grid fluctuations.
- **Ancillary services:** Energy services to back up the utility grid, e.g. primary operating reserve, secondary operating reserve and tertiary control.

* depends on connected inverter



MAXIMUM SAFETY

Prismatic battery cells are incredibly durable, safe and powerful, particularly in comparison to round cells. TESVOLT uses Samsung SDI cells and offers a 10-year performance guarantee on the battery modules.



LONG LIFESPAN

The lifespan of a battery has a huge impact on its economic efficiency. Our storage system features outstanding performance: all components are designed to last 8,000 cycles or offer a 30-year lifespan.

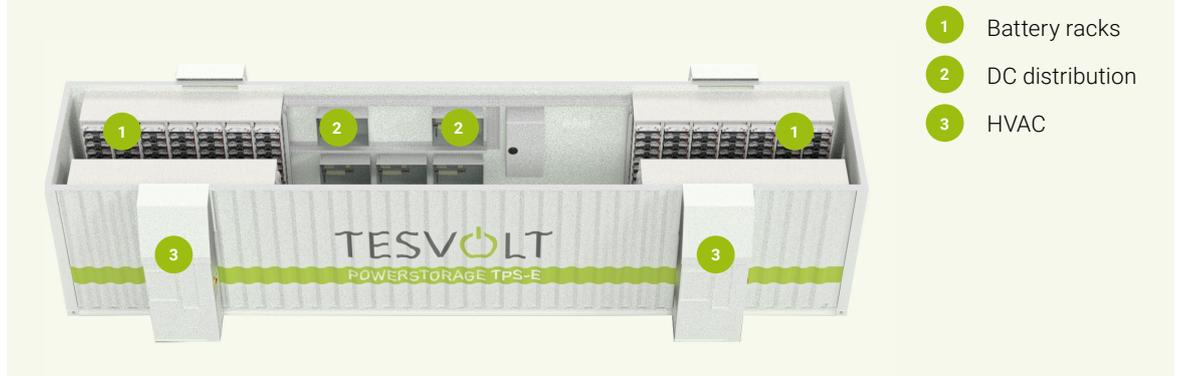


TESVOLT

POWER STORAGE TPSE

A POWERHOUSE FOR ALL PURPOSES

*The graphics shown may differ from the actual structure.



The TPS-E storage system has a fully modular design from the battery modules to the container, so it can be flexibly adapted and is also extremely efficient thanks to its long lifetime.

Our battery storage systems can be optimally adapted to suit every application.

Whether it's used to optimise self-consumption or shave peak loads, connected to the electricity grid or used off-grid to optimise diesel hybrid systems, whether it's used in the desert or the polar circle, with the TESVOLT TPS-E, TESVOLT offers a technical storage system solution to suit every application. Its advanced, cost-optimised design ensures unbeatable cost efficiency without compromising on quality and performance. It is extremely robust and well suited to even the toughest of tasks. High-quality battery cells from the automotive industry and innovative technologies such as the Dynamix Battery Optimizer make the TESVOLT TPS-E storage system one of the most durable products on the market.

ECO COOLING SYSTEM

- Keeps noise at a sustainably low level
- Reduces operating costs

DYNAMIX BATTERY OPTIMIZER

- Brand-new dynamic balancing system
- No dead times – balancing takes place at the same time as storage system charging and discharging
- Enhanced efficiency and lower operating costs than comparable systems

OTHER BENEFITS

- Can be used up to a rated voltage of 1,300 V DC
- Black-start capable
- 100 % DoD
- Master/slave systems have a high level of resilience against failure
- More economical thanks to more power per cubic metre
- Remote maintenance possible
- Three different container sizes available (20, 40 or 45 ft)

TECHNICAL SPECIFICATIONS TESVOLT TS HV 90

C-rate		1C
Cells		Lithium NMC prismatic (Samsung SDI)
Cell balancing		DynamiX Battery Optimizer
Expected cycles @ 100% DoD 70% EoL 23°C± 5°C 1C/1C		6000
Expected cycles @ 100% DoD 70% EoL 23°C± 5°C 0.5C/0.5C		8000
Cycle efficiency (battery)		up to 98 %
Operating voltage		up to 1300 V DC
Communication interface		CAN 2.0, Modbus TCP/IP
Certificates/standards (currently in preparation)	Cells	IEC 62619, UL 1642, UN 38.3
	Product	CE, UN 38.3, IEC 62619, IEC 61000-6-2/4/7, BattG 2006/66/EC
Warranty		10-year performance guarantee, 5-year system guarantee
Recycling		TESVOLT offers free return of batteries from Germany
Protection class		IP 20
Battery specification as per DIN EN 62620:2015		INP46/175/127/[1P22S]M/-20+60/90

CONTAINER SYSTEM

Size	20 ft	40 ft	45 ft
Dimensions (L x W x H)	6.06 x 2.44 x 2.90 m	12.12 x 2.44 x 2.90 m	13.72 x 2.44 x 2.90 m
Energy (max.)	1,9 MWh	4,2 MWh	4,8 MWh
Number of storage systems	up to 19	up to 42	up to 48
External operating temperature range	-20 to 45 °C		
Altitude of installation site	< 2000 m above sea level (other specifications on request)		
Protection class	IP 54		
Special equipment (optional)	Fire extinguisher, CSC certification, available in all RAL colours, greater operating temperature range, corrosion protection to C4		

ABOUT TESVOLT

Daniel Hannemann and Simon Schandert established TESVOLT in the summer of 2014 with a vision – to bring affordable, clean energy to every corner of the world. Their aim was to develop and manufacture battery systems that store power from renewable energy sources as efficiently as possible.

Given that the biggest energy consumers in many countries are trade and industry, the company focused on storage systems with a large capacity from the very beginning. Today, TESVOLT produces its solutions for commercial storage systems in series and supplies them all around the world.

Your certified TESVOLT specialist partner

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