

TS HV 70 OUTDOOR

The weather-proof all-rounder for industry and commerce



Durable • 1C charging speed • The safest cell technology

HIGH-VOLTAGE SYSTEM

TESVOLT
THE ENERGY STORAGE EXPERTS

WE HAVE A “THEN” FOR ANY “WHEN”.

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

Whether to increase self consumption or to cut peak loads, on- or off-grid to optimise diesel hybrid systems, whether in the desert or the Arctic circle – with the *TESVOLT TS HV 70 storage system*, TESVOLT offers a technical storage solution for any application. Its advanced, cost-optimised design makes for unbeatable efficiency – without sacrificing quality or per-

formance. It is extremely robust and is therefore well-suited to the hardest tasks. Thanks to high-quality battery cells from the automobile industry and innovative technologies, such as the *Active Battery Optimizer*, our *TESVOLT TS HV 70 outdoor storage system* is one of the most efficient and durable products on the market.

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 capacity guarantee of 10 years on the battery modules.

Samsung SDI cell



Robust and durable

Thanks to the robust double-walled aluminium casing, the storage system offers the highest level of impact protection, IK 10. Battery cells and battery management are built to last an outstanding 8,000 cycles or offer a 30-year lifespan.

Battery module



Perfectly adaptable

Two different cooling concepts and additional optional features guarantee that the system can adapt perfectly to the operating conditions. This means you invest only in the features you need.

Battery storage system



High-performance without compromise

TS HV 70 Outdoor storage systems can store energy very quickly, and release it again just as quickly. With a continuous power rating of 1C the storage system is optimised for professional use in commercial applications, agriculture and industry.

Flexibility now and in the future

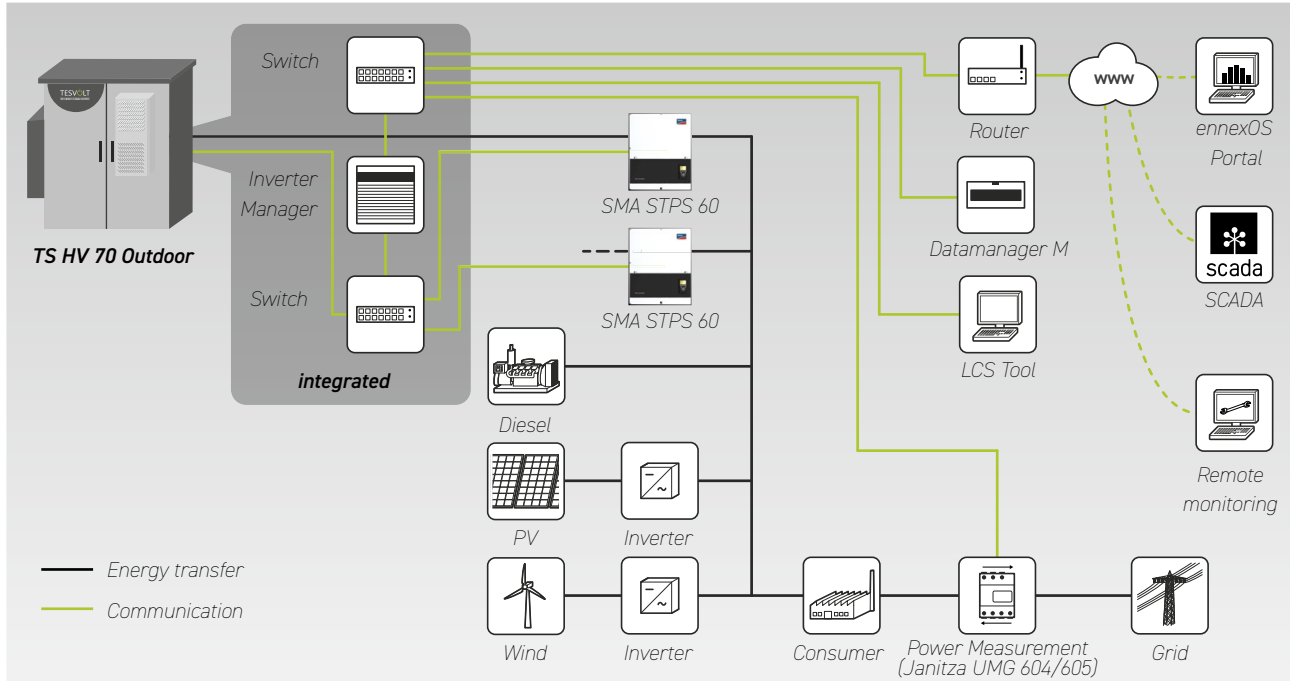
Our *TS HV 70 Outdoor storage systems* do not only offer flexible configuration options at the moment of purchase – thanks to the innovative *Active Battery Optimizer* technology, the battery modules can also be expanded or exchanged even years later.

SETUP

The *TS HV 70 Outdoor storage system* is designed to be completely modular, from the prismatic battery cells to the outdoor rack. It is therefore easily customised and extremely efficient, thanks to its long service life.

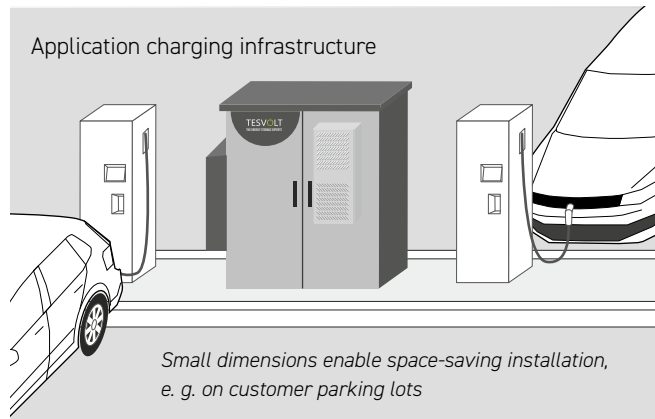
- 1 Overcharge safety device
- 2 Vent
- 3 Fuse
- 4 Battery module
- 5 Active Battery Optimizer
- 6 Active Power Unit
- 7 Electrical connections
- 8 Housing for SMA STPS 10

SYSTEM SETUP

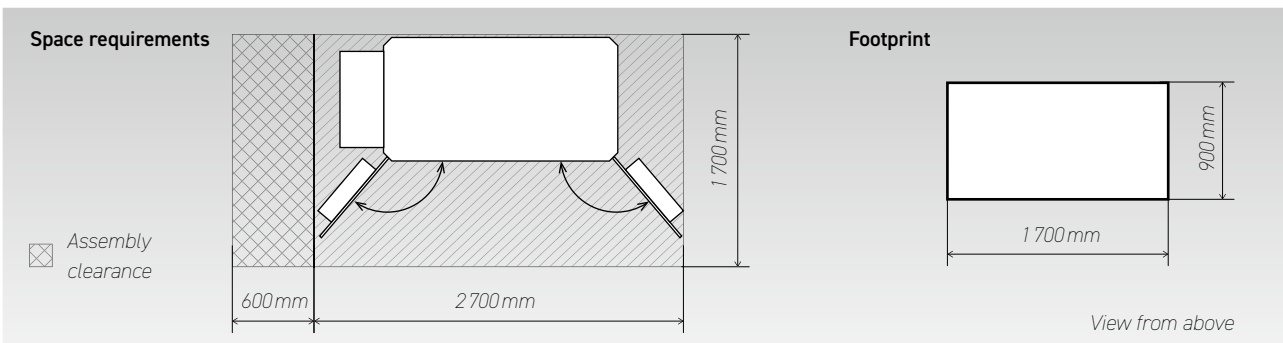


APPLICATIONS

- **Charging infrastructure** – solve the problems of the future and combine the applications of peak shaving, self-consumption and grid services
- **Diesel hybrid optimisation** – diesel hybrid systems can be optimised for consumption with this system
- **Time of Use** – Use of the storage system is dependent on the electricity cost (charge when high, discharge when low)
- **Peak load shifting** – cut your peaks in consumption and save money by reducing the size of the mains connection
- **Increase self consumption** – use more of the power you have generated
- **Ancillary services** – manage frequency, effective and reactive power, and balance grid fluctuations



INSTALLATION



TECHNICAL DATA FOR OUTDOOR RACK COOLING VARIANTS

Model	Cooling method	Min temp. (ambient)	Max temp. (ambient)	Corrosive atmosphere
Medium	closed system	-28°C	40°C	yes
Premium	closed system	-33°C	55°C	yes

SYSTEM CONFIGURATIONS

The table below shows the energy content in relation to output and the number of racks and SMA STPS 60.

The racks can be equipped with 14 or 16 battery modules.

4 x	307 kWh	●	○	●	○			●	○
	268 kWh	●		●				●	
3 x	230 kWh	●	○			●	○		
	201 kWh	●				●			
2 x	153 kWh	●	○	●	○				
	134 kWh	●		●					
1 x	76 kWh	●	○						
	67 kWh	●							
Number ↑ of TS HV 70 Outdoor Racks	System ↑ Energy	60 kW	75 kW	120 kW	150 kW	180 kW	225 kW	240 kW	300 kW
	System → Power	1 x SMA STPS 60		2 x SMA STPS 60		3 x SMA STPS 60		4 x SMA STPS 60	

● max. discharge/charge power
○ max. discharge power

Technical data TESVOLT TS HV 70 Outdoor		
Energy (14 16 battery modules)	67 kWh 76 kWh	
C-rate	1C	
Cells	Lithium NMC prismatic (Samsung SDI)	
Max. charging, discharging current	94 A	
Cell balancing	Active Battery Optimizer	
Cycles @ 100% DoD 70% EOL 23°C +/-5°C 1C/1C	6 000	
Cycles @ 100% DoD 70% EOL 23°C +/-5°C 0.5C/0.5C	8 000	
Efficiency (battery)	up to 98%	
Selfconsumption (Standby)	5 W (without battery inverter)	
Operating voltage	666 to 930 V	
Ambient temperature	-33 to 55°C ^{1, 2}	
Humidity	< 85% (non-condensing)	
Elevation of installation location	< 2 000 m above sea level N.N.	
Weight	Total	< 1 020 kg 1 101 kg ¹
	Battery module	36 kg
	Outdoor rack	< 280 kg ¹
Dimensions (HxWxD)	1945 x 1989 x 1030 mm ¹	
Certificates/norms	Cells	IEC 62619, UL 1642, UN 38.3
	Battery module	CE, UN 38.3, IEC 62619, IEC 61000-6-1/2/3/4, BattG 2006/66/EC
	Cabinet	DIN EN 62208, DIN EN 62368-1, DIN EN 60950-1, DIN EN 61439, IEC 62262-1K10 GR-487-CORE, R3-40/41/42/43/44/59/192/204/207
Warranty	10-year capacity guarantee, 5-year system guarantee	
Recycling	TESVOLT offers free return of batteries from Germany	
Protection class	IP 55, NEMA 3/3R	

¹ according to design | ² SMA STPS 60: -25 to 50°C

Your certified TESVOLT partner

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