

# 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 performance.

## Maximum safety

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

## 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.

## 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.

## 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

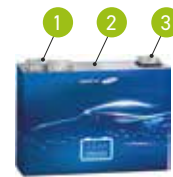
Our *TS HV 70 Outdoor storage systems* do not only offer flexible configuration options at the moment of purchase – thanks to the innovative *Active Battery Optimizer* technology, the battery modules can also be expanded or exchanged even years later.

## 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.

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.

## Samsung SDI cell



## Battery module

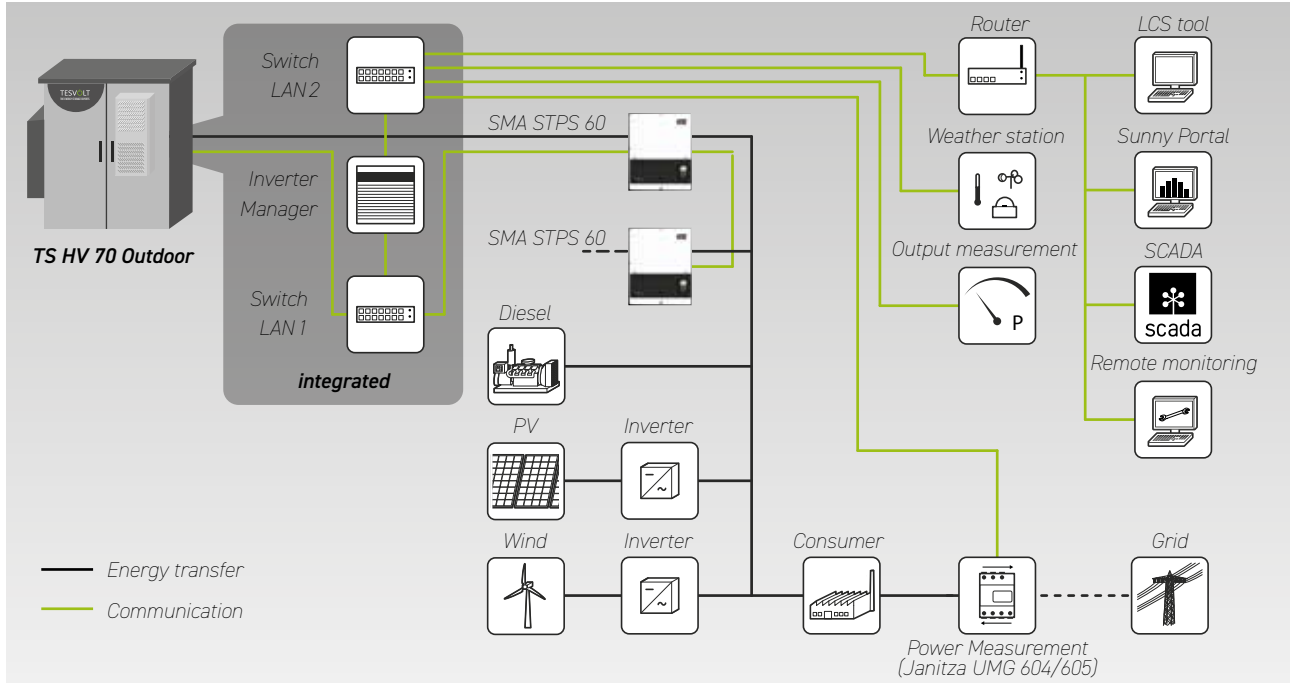


## Battery storage system



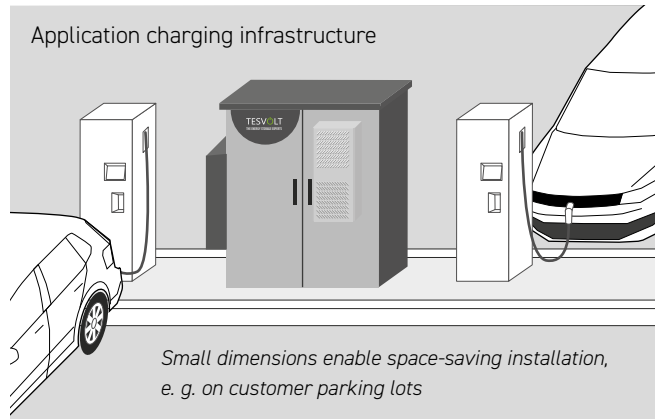
- 1 Overcharge safety device
- 2 Vent
- 3 Fuse
- 4 Battery module
- 5 Active Battery Optimizer
- 6 Active Power Unit
- 7 Electrical connections
- 8 Housing for SMA STPS 70

# SYSTEM SETUP

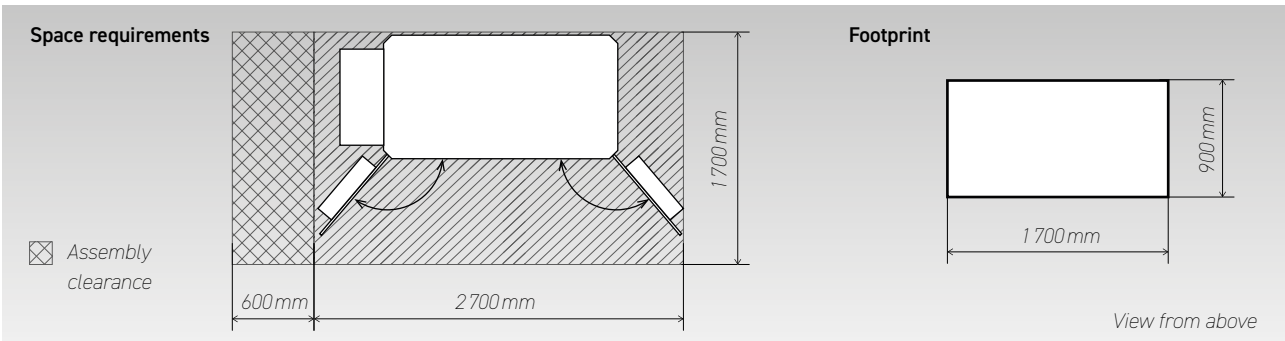


## APPLICATIONS

- **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
- **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
Basic	open system	-17°C	36°C	no
Medium	closed system	-28°C	40°C	yes
Premium	closed system	-33°C	55°C	yes

## SYSTEM CONFIGURATIONS

The following table displays the output depending on the energy content and 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	100A	
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 (without cooling/heating)	5 W	
Operating voltage	627 to 930 V	
Ambient temperature	-33 to 55°C <sup>1, 2</sup>	
Humidity	< 85% (non-condensing)	
Elevation of installation location	< 3,000 m above sea level N.N.	
Weight	Total	< 860 kg <sup>1</sup>
	Battery module	36 kg
	Outdoor rack	< 280 kg <sup>1</sup>
Dimensions (HxWxD)	1,945 x 1,989 x 1,030 mm <sup>1</sup>	
Certificates/norms	Cells	IEC 62619, UL 1642, UN 38.3
	Battery module	CE, UL 1973, 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 performance warranty, 5-year product warranty	
Recycling	free battery take-back scheme from TESVOLT	
Protection class	IP55, NEMA 3/3R	

<sup>1</sup> according to design | <sup>2</sup> SMA STPS 60: -25 to 60°C

Your certified TESVOLT partner

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