TECHNICAL DATA SHEET

TS HV 50 E HYBRID

TESVOLT
Free to go green.

- 2-in-1 hybrid storage solution in the commercial sector with integrated back-up function (< 10 ms)
- With 3 MPPT, a flexible design of the roof area is possible
- Can be used as a purely AC-coupled battery inverter
- One of the safest storage systems in Europe, certified by TÜV Rheinland
- Powerful battery cells from Samsung SDI for a long service life
- Simple installation and commissioning thanks to harmonised system components

TECHNICAL DATA FOR BATTERY STORAGE SYSTEM

		TS HV 50 E Hybrid	
Product name		TS HV 50 E Hybrid	
Type designation		TS HV 50/5-20	TS HV 50/8-20
Energy content (at 100% DoD)		40 kWh	64 kWh
Nominal voltage		405 V ⎓	648 V ⎓
Operating voltage		363 - 457 V ⎓	581 - 730 V ⎓
Nominal/maximum charging/discharging current		100 A ⎓	
Max. C-rate	with GW 25K-ET	0,6C	0,4C
	with GW 29.9K-ET	0,7C	0,5C
Overvoltage category		III	
Cell		Lithium-NMC prismatic (Samsung SDI)	
Cell balancing		DynamiX Battery Optimizer	
Cycles expected @ 100% DoD | 70% SoH | 23°C +/-5°C 1C/1C		6000	
Cycles expected @ 100% DoD | 70% SoH | 23°C +/-5°C 0.5C/0.5C		8000	
Efficiency (battery)		up to 98%	
Self-consumption (standby)		5 W (without battery inverter)	
Operating temperature		0°C to 50°C (derating at low temperatures)	
Ambient temperature		0°C to 50°C (optimal: 25°C +/-5°C)	
Ambient temperature for capacity guarantee		10°C to 45°C	
Humidity		0 to 80% (non-condensing)	
Cooling concept		Passive via fins and active via fans	
Altitude of installation site		< 2,000 m above sea level	
Max. noise emission (per fan running)		65 dB	
Weight	Total	426 kg	595 kg
	Battery module | APU | Cabinet	56 kg | 13 kg | 130 kg	
Dimensions of cabinet (H x W x D)		1608 mm x 608 mm x 808 mm	
with wall bracket		1608 mm x 608 mm x 990 mm	
Tilt height of cabinet forwards, backwards/sidewards		1778 mm/1705 mm	
Certificates/ standards	Cell	IEC 62619:2017, UL 1642, UN 38.3	
	Battery module	UN 38.3, IEC 62619:2017, IEC 62620:2014	
	Product	CE, UN 38.3, IEC 62619:2017, IEC 61010-1+A1:2016, IEC 61508:2010, IEC 61000-6-2:2016, IEC 61000-6-4:2019, IEC 61000-6-7:2015, 2006/66/EG (Battery Directive)	
Guarantee		10-year performance guarantee, 10-year system guarantee	
Recycling		TESVOLT offers a free take-back scheme for batteries from Germany	
Protection class		IP 20	
Degree of protection		I	
Pollution degree		PD 2	
IK class		IK 10	
Battery specification as per IEC 62620:2014		INP46/175/127/[1P22S]M/-20+60/90	

TECHNICAL DATA OF COMPATIBLE HYBRID INVERTERS (GOODWE ET (25-29.9 KW) SERIES)*

Type designation	GW25K-ET	GW29.9K-ET
Nominal power	25 kW	29.9 kW
Max. output power (back-up only, without grid)	30 kVA @ 60s	36 kVA @ 60s
Nominal output voltage	380 V / 400 V, 3L / N / PE	
Grid frequency range	45 Hz to 65 Hz	
Max. PV input power	37.5 kW	45 kW
MPPT operating voltage range	200 V ⎓ to 850 V ⎓	
Max. Input current per MPPT	30 A	
Number of MPPTs	3	
Number of strings per MPPT	2 / 2 / 2	
Dimensions (H x W x D)	520 x 660 x 220 mm	
Max. Efficiency/European efficiency/MPPT efficiency	98 % / 97.5 % / 99.9 %	
Self-consumption (at night, without back-up output)	< 15 W	
Operating temperature/Humidity	-35 °C to +60 °C / 0 % to 95 %	
Noise	< 45 dB	< 60 dB
Weight	54 kg	
Protection class	IP 66	
Topology / cooling principle	Not insulated / Intelligent fan cooling	
Guarantee	5 years (standard)	
Certificates	See Goodwe website (https://de.goodwe.com/document-download)	

* The hybrid inverter types mentioned are compatible with the TS HV 50 battery system. The inverters are not part of the TESVOLT scope of delivery and must be purchased separately.

APPLICATIONS

Self-Consumption
Optimisation

Peak Shaving

Back-Up Power

Control of
consumers

SYSTEM CONFIGURATIONS

1 string
40/64 kWh

2 strings
80/128 kWh

3 strings
120/192 kWh
(in preparation)

4 strings
160/256 kWh
(in preparation)

MADE
IN
GERMANY

SAMSUNG
SAMSUNG SDI
PARTNER

Management
System
ISO 9001:2015
www.tuv.com
ID 9108027176

EUROPÄISCHE UNION
EFRE
Europäischer Fonds für
regionale Entwicklung

This project has received funding from the European Union´s
Horizon 2020 research and innovation programme under
grant agreement No 829877