

MANUFACTURER’S GUARANTEE

for stationary lithium battery storage systems of TS-I HV 80 E and TS-I HV 100 E series of TESVOLT AG

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Preamble

TESVOLT AG ("TESVOLT") develops and manufactures high-quality battery storage systems based on lithium ions ("TESVOLT storage system"). TESVOLT storage systems include the housing, the battery modules consisting of several battery cells, the wiring and fuses, the TESVOLT battery management system, consisting of the DynamiX Battery Optimizer (DBO) and the Active Power Unit (APU) as well as the operating software installed on the TESVOLT storage system. Exceeding components that are possibly included in the scope of delivery of the seller of the TESVOLT storage system, e.g. the battery inverter or the energy management system, are not part of the TESVOLT storage system. TESVOLT grants a manufacturer's guarantee ("guarantee") under the following conditions. The guarantee covers the capacity of the battery modules for a period of ten years ("performance guarantee") as well as the functionality of the TESVOLT storage system over a period of five years ("system guarantee").

1. Who provides the guarantee?

The issuer of this guarantee and the contact for all questions and the assertion of guarantee claims is TESVOLT AG, Am Heideberg 31, D-06886 Lutherstadt Wittenberg, registered at the district court of Stendal under registration number HRB 31785.

2. Which products are covered by the guarantee?

The guarantee applies exclusively to TESVOLT storage systems of the TS-I HV 80 E and TS-I HV 100 E series distributed by TESVOLT since May 1, 2022, which have been installed and commissioned by TESVOLT or a qualified third party authorized by TESVOLT and the commissioning of which has been notified to TESVOLT by mail, fax or e-mail (service@tesvolt.com) within a period of 31 calendar days after commissioning by means of a signed commissioning report completed at the time of commissioning ("products entitled to the guarantee"). With the TESVOLT battery storage system, the person entitled to the guarantee is provided with the submission of a commissioning report in electronic (e.g. USB stick) and written form. It can also be requested from TESVOLT.

3. Who can claim rights under this guarantee?

TESVOLT only provides this guarantee to end customers of TESVOLT storage systems who are operating the respective TESVOLT storage system themselves at the time of asserting guarantee claims ("person entitled to the guarantee"). Traders of TESVOLT storage systems, regardless of type and level of trade, cannot derive any claims against TESVOLT from the guarantee. The guarantee is directed exclusively at entrepreneurs or companies, but not at consumers, that are natural persons who operate the TESVOLT battery storage system privately, neither for commercial nor for professional purposes.

4. Where does the guarantee apply?

- 4.1. The guarantee is applicable worldwide.
- 4.2. The guarantee services differ in individual countries within the geographical area of application. The scope of the guarantee services is set out in Section [10](#).

5. How does the guarantee relate to other claims of the person entitled to the guarantee?

- 5.1. The guarantee grants the person entitled to the guarantee direct claims to the extent and in accordance with the provisions of this guarantee against TESVOLT. TESVOLT grants these direct claims in addition to statutory warranty claims.
- 5.2. Warranty claims against the respective seller of the TESVOLT storage system as well as other legal claims, e.g. from the German Product Liability Act (ProdHaftG), remain unaffected by the guarantee. This shall also apply if the seller of the TESVOLT storage system is TESVOLT itself. The special requirements for the assertion of claims of this guarantee do not apply with regards to the assertion of warranty claims from the purchase contract against the seller.
- 5.3. Claims of the person entitled to the guarantee arising from a product warranty of TESVOLT or the respective manufacturer for other products distributed by TESVOLT, such as battery inverters or energy management systems, shall remain unaffected by this guarantee.

6. How long is the guarantee period?

- 6.1. The guarantee period of the performance guarantee for the battery modules referred to in Section [7](#) shall be ten years. It begins with whichever of the following events occurs first:
- a) initial commissioning of the TESVOLT battery storage system,
 - b) eight weeks after delivery of the TESVOLT battery storage system to the person entitled to the guarantee,
 - c) six months after the end-of-line test date (DOLC) of the battery modules, which can be seen on the label of the battery modules.
- 6.2. The guarantee period of the system guarantee according to Section [8](#) is five years. It also begins with the initial commissioning of the TESVOLT battery storage system, but no later than eight weeks after delivery of the TESVOLT battery storage system to the person entitled to the guarantee.
- 6.3. The guarantee shall also apply to a replacement device for a product covered by the guarantee, or a replaced component of a product covered by the guarantee which is replaced by TESVOLT or a qualified third party authorized by TESVOLT on the basis of a guarantee claim in fulfillment of the guarantee claims pursuant to Section [10](#). In this case, however, the guarantee period shall also be limited to the guarantee period for the first guarantee-eligible product delivered and shall not be extended.

7. What is the content of the performance guarantee?

- 7.1 TESVOLT guarantees that the capacity of the battery modules of the TESVOLT storage system will be at least 70 percent of the nominal capacity until the minimum number of full charge cycles guaranteed in accordance with the following provisions has been reached, but not later than the end of the guarantee period in accordance with Section [6](#).
- 7.2 The lifetime of the battery modules of the TESVOLT storage system depends on the C-rate and the ambient temperature of the TESVOLT storage system. Against this background, TESVOLT guarantees a certain minimum number of full charge cycles, depending on the C-rate and the ambient temperature, according to Sections [7.3](#) to [7.6](#).
- 7.3 The following conditions apply:
- 7.3.1. The ambient temperature is the temperature of the environment of the TESVOLT storage system measured by means of a temperature sensor in an external temperature measuring device and continuously stored (min. in a 3-minute resolution) for a period of at least one year
 - 7.3.2. The C-rate corresponds to the strength of the charging and discharging current in relation to the nominal capacity of the TESVOLT storage system. The strength of the charging and discharging current is continuously recorded in the logging file of the TESVOLT storage system. The classification of the relevant C-rate in the table in Section [7.4](#) is based on the highest recorded C-rate during the period from the initial commissioning of the TESVOLT storage system until the occurrence of the guarantee case ("operating period").
 - 7.3.3. A full charge cycle corresponds to charging and discharging the entire capacity of the battery modules with a depth of discharge (DoD) of 100 percent. Partial cycles are counted on a pro rata basis.
- 7.4 In the case of a continuous operation of the TESVOLT storage system with an ambient temperature according to the second column of the following table, TESVOLT guarantees, based on the C-rate indicated in the first column, the number of full charge cycles indicated in the third column:

C-rate (max.)	Ambient temperature	Guaranteed minimum number of full charge cycles
up to 0.50	under 10.0°C	Performance guarantee expires
up to 0.50	from 10.0°C to 17.9°C	6.500
up to 0.50	from 18.0°C to 35.0°C	6.000
up to 0.50	from 35.1°C to 45.0°C	Reduction of the guaranteed cycles according to Section 7.5
up to 0.50	over 45.0°C	Performance guarantee expires
from 0.51 to 1.00	under 10.0°C	Performance guarantee expires
from 0.51 to 1.00	from 10.0°C to 17.9°C	5.000
from 0.51 to 1.00	from 18.0°C to 35.0°C	4.500
from 0.51 to 1.00	from 35.1°C to 45.0°C	Reduction of the guaranteed cycles according to Section 7.5
from 0.51 to 1.00	over 45.0°C	Performance guarantee expires

Table 1: Guaranteed minimum number of full charge cycles

- 7.5 If a TESVOLT storage system is temporarily operated in an ambient temperature range of 35.1°C to 45.0°C during the operating period the number of guaranteed full charge cycles shall be reduced in accordance with the following: For each day on which the ambient temperature reaches the temperature range of 35.1°C to 45.0°C, even briefly, a certain number of cycles shall be deducted from the guaranteed number of full charge cycles depending on the C-rate and the ambient temperature in accordance with the following table (additional cycles):

Ambient temperature	C-rate (max.) up to 0.50	C-rate (max.) up to 1.00
35.1°C to 40.0°C	20 cycles	15 cycles
40.1°C to 45.0°C	29 cycles	22 cycles

Table 2: Additional cycles when the optimum ambient temperature is exceeded

- 7.6 Insofar as a TESVOLT storage system is temporarily operated in another temperature range during the operating period, the operating hours in the respective temperature range shall be multiplied by the minimum number of full charge cycles guaranteed for the temperature range in each case, whereby for the range from 35.1°C to 45.0°C the respective valid minimum number from the range 18.0°C to 35.0°C shall be applied. The sum of the hourly values determined is then divided by the sum of the operating hours in these temperature ranges. If a TESVOLT storage system is operated in the temperature range from 35.1°C to 45.0°C, the corresponding additional cycles are then deducted in accordance with Section [7.5](#). TESVOLT guarantees the resultant value of full charge cycles.

Example for a TESVOLT battery storage with a C-rate (max.) up to 0.50:

Operating hours/days	Ambient temperature	Guaranteed minimum number of full charge cycles
61.212 hrs	from 10.0°C to 17.9°C	6.500
23.967 hrs	from 18.0°C to 35.0°C	6.000
27 d = 648 hrs	from 35.1°C to 40.0°C	Reduction of the guaranteed cycles according to Section 7.5

Table 3: Example of calculation of guaranteed cycles

Guaranteed number of full charge cycles in this example:

$$(61.212 \text{ hrs} * 6.500 + 23.967 \text{ hrs} * 6.000 + 648 \text{ hrs} * 6.000) / (61.212 \text{ hrs} + 23.967 \text{ hrs} + 648 \text{ hrs}) - 27 \text{ d} * 20 = 5.816 \text{ (rounded)}$$

- 7.7 If a TESVOLT storage system is operated at an ambient temperature of less than 10.0°C or more than 45.0°C for even a short period of time at any time, the performance guarantee is voided.

8. What is the content of the system guarantee?

- 8.1. TESVOLT guarantees that during the guarantee period as defined in Section 6.2 the TESVOLT storage system is free from material and manufacturing defects which significantly impair the functionality of the TESVOLT storage system.
- 8.2. Claims under the system guarantee exist only if and as long as the ambient temperature is between 0.0°C and 50.0°C during the entire operating period. It is the responsibility of the person entitled to the guarantee to prove compliance with this requirement using the external temperature measuring device provided together with the TESVOLT storage system.

9. When does the guarantee case occur and how is it verified?

- 9.1. The guarantee case under Section 7 (performance guarantee) occurs if the capacity of the respective battery module falls below 70 percent of the nominal capacity (end of life) before the number of full charge cycles guaranteed under Section 7 is reached within the respective guarantee period. TESVOLT shall test the capacity of the battery module under the following standard test conditions to determine whether a guarantee case according to Section [Fehler! Verweisquelle konnte nicht gefunden werden.](#) exists
- 9.1.1. Ambient temperature during the test: 23.0°C
- 9.1.2. The battery module is charged to a state of charge (SoC) of more than 80 percent (3.908 V * 22 = 86.0 V) and cell balancing is performed.
- 9.1.3. The battery module is discharged to the final discharge voltage or to a state of charge (SoC) of 0 percent (3.2 V * 22 = 70.4 V) with a C-rate of 0.2. A waiting time of 30 minutes follows.
- 9.1.4. The battery module is then charged using the constant current charging method at a C-rate of 0.2 up to the maximum charge voltage. Once this is reached, the constant voltage charging method is used to charge to 100 percent state of charge (SoC) (4.15 V * 22 = 91.3 V). A waiting time of 30 minutes follows.
- 9.1.5. The battery module is then discharged at a C-rate of 0.2 to the final discharge voltage or to a state of charge (SoC) of 0 percent (3.2 V * 22 = 70.4 V).

- 9.1.6. Steps [9.1.3](#) to [9.1.5](#) are repeated one more time.
 - 9.1.7. The capacity is defined as the capacity measured on the battery DC side during the second discharge.
- 9.1. The guarantee case under Section [8](#) (system guarantee) occurs if a material or manufacturing defect occurs in the TESVOLT storage system which does significantly impair the functionality of the TESVOLT storage system. Deviations of the capacity of the battery modules from the nominal capacity are to be assessed solely according to the provisions of Section [7](#) (performance guarantee) and do not constitute a guarantee case under Section [8](#) (system guarantee).

10. What guarantee services does TESVOLT have to provide?

- 10.1. In the event of a guarantee case, TESVOLT shall, at its own discretion
 - 10.1.1. repair the product entitled to the guarantee or the affected component of the product entitled to the guarantee at the location of the product entitled to the guarantee,
 - 10.1.2. repair the product entitled to the guarantee or the affected part of the product entitled to the guarantee at the site of TESVOLT or a qualified third party authorized by TESVOLT, or
 - 10.1.3. supply and install an equivalent replacement product or an equivalent component at the location of the product entitled to the guarantee, or
 - 10.1.4. in the event of a guarantee claim under Section [7](#) (performance guarantee), replace the current market value of the product covered by the guarantee. For this purpose, the parties assume that the current market value of the product in the first year of the guarantee period corresponds to the purchase price and decreases linearly by 10 percent of the original purchase price from the second year of the guarantee period onwards (e.g. the time value in the second guarantee year would be 90 percent of the original purchase price and in the fifth year of the guarantee period 60 percent of the original purchase price).
- 10.2. If a guarantee service by TESVOLT fails, TESVOLT shall be entitled to provide the same or another form of guarantee service repeatedly, unless this is intolerable for the person entitled to the guarantee.
- 10.3. If the original product or component is no longer available or can only be procured or manufactured at a disproportionate expense, TESVOLT reserves the right to supply a replacement product or component that is functionally equivalent to the product entitled to the guarantee.
- 10.4. With the commissioning of the replacement product or the replacement component, the original product or the original component becomes the property of TESVOLT. Components exchanged by way of repair shall also become the property of TESVOLT.
- 10.5. TESVOLT may commission third parties authorized and qualified by TESVOLT to carry out the guarantee services.
- 10.6. If the TESVOLT storage system is not located in a country which is a TESVOLT Support Country pursuant to Section [10.7](#) at the time of the guarantee case or which was a TESVOLT Support Country at the time of the commissioning of the TESVOLT storage system, the person entitled to the guarantee may only request guarantee services by TESVOLT if:
 - 10.6.1. the person entitled to the guarantee undertakes to bear all additional costs which TESVOLT may incur as a result of the guarantee services provided in comparison with the provision of guarantee services in the geographically nearest TESVOLT Support Country, and

- 10.6.2. the person entitled to the guarantee has paid TESVOLT an advance which fully covers the anticipated additional costs incurred by TESVOLT in accordance with Section [10.6.1](#).
- 10.7. The countries in which TESVOLT currently offers support (TESVOLT Support Countries) are listed on TESVOLT's website at <https://www.tesvolt.com/de/downloads.html>. At the request of the person entitled to the guarantee, TESVOLT shall provide the status of the list of TESVOLT Support Countries at the time of the commissioning of the TESVOLT storage system.

11. What must be taken into account when making a claim under the guarantee?

- 11.1. The assertion of claims under the guarantee must be notified to TESVOLT in writing within the guarantee period and must be made within a maximum of ten working days after the person entitled to the guarantee has become aware of the guarantee claim or should have become aware of it without gross negligence.
- 11.2. The person entitled to the guarantee must provide TESVOLT with the following data and documents in the notification:
 - 11.2.1. serial number of the product,
 - 11.2.2. original invoice, unless the person entitled to the guarantee has purchased the TESVOLT storage system himself from TESVOLT or a TESVOLT specialist partner, and
 - 11.2.3. suitable proof of the time of the initial commissioning of the TESVOLT storage system by submitting the fully completed commissioning report.

12. What are the obligations of the person entitled to the guarantee to cooperate in the verification of the guarantee claim?

- 12.1. The person entitled to the guarantee is obliged to provide TESVOLT or a qualified third party authorized by TESVOLT with access to the logging file of the TESVOLT storage system as well as to the data of the external temperature measuring device within seven (7) working days after notification of the guarantee claim in accordance with Section [11](#) and in accordance with the possibilities at his disposal. The person entitled to the guarantee is obliged to follow the instructions of TESVOLT or the qualified third party authorized by TESVOLT.
- 12.2. The person entitled to the guarantee is obliged to provide TESVOLT or a qualified third party authorized by TESVOLT with remote access to the monitoring software of TESVOLT, e.g. BATMON, contained in the TESVOLT storage system. TESVOLT or a qualified third party authorized by TESVOLT will instruct the person entitled to the guarantee in this process.
- 12.3. The person entitled to the guarantee is obliged to provide TESVOLT or a qualified third party authorized by TESVOLT upon request with information on repair, care and maintenance measures carried out on the TESVOLT storage system, such as maintenance records.
- 12.4. The person entitled to the guarantee must grant TESVOLT or a qualified third party authorized by TESVOLT unhindered access to the product entitled to guarantee for the purpose of checking whether a guarantee case exists and for the purpose of performing guarantee services.

13. When are the costs of the inspection to be borne by the person entitled to the guarantee?

Insofar as no claim of guarantee is determined in the inspection by TESVOLT or a qualified third party authorized by TESVOLT or it is determined that the guarantee claim is excluded in accordance with Section [14](#),

TESVOLT may demand reimbursement from the person entitled to the guarantee for the expenses incurred for the inspection. Working time spent is calculated at an hourly rate of 95.00 EUR, whereby the maximum rate per day is 760.00 EUR in the case of an inspection in Germany and 920.00 EUR in the case of an inspection in another country. For the arrival and departure at the site of the TESVOLT storage system 0.30 Euro per km will be charged. Other travel expenses incurred shall be calculated in accordance with the provisions of the Federal Travel Expenses Act (BRKG). All amounts stated are exclusive of the applicable value added tax.

14. When are guarantee claims excluded?

- 14.1. The guarantee does not cover TESVOLT storage systems or their components that have been impaired, damaged or destroyed due to one or more of the following circumstances:
- 14.1.1. They have not been stored, transported, set up or installed in an appropriate and professional manner, in accordance with technical standards and regulations, in accordance with the respective installation and operating manual of the TESVOLT storage system or in accordance with instructions of TESVOLT sent to the person entitled to the guarantee.
 - 14.1.2. They have been removed from the location of initial commissioning or moved to another location, reinstalled or dismantled, unless TESVOLT has expressly agreed to this in writing beforehand.
 - 14.1.3. They have been resold, recycled or otherwise reused, unless TESVOLT has expressly agreed to this in writing beforehand.
 - 14.1.4. They have been operated contrary to their intended use or contrary to the instructions in the respective installation and operating manual for the TESVOLT storage system.
 - 14.1.5. They have been operated in connection with inverters or rectifiers or other power electronics which are not listed in the respective installation and operating manual of the TESVOLT storage system, unless their use has been approved to the person entitled to the guarantee by TESVOLT prior to the initial installation with regard to this guarantee.
 - 14.1.6. They have not been operated for a period of more than six months from the date of the dispatching by TESVOLT (ex factory).
 - 14.1.7. They were constantly out of service for a period of more than six months after their initial commissioning.
 - 14.1.8. They have not been serviced properly and professionally or according to technical standards, in particular not in accordance with the maintenance instructions of the respective installation and operating manual of the TESVOLT storage system.
 - 14.1.9. They have been exposed, even temporarily, to one or more of the following conditions:
 - 14.1.9.1. a power of more than 1 C,
 - 14.1.9.2. a cell-voltage of less than 2.7 V or more than 4.23 V,
 - 14.1.9.3. an operating temperature of more than 50.0°C or less than 0.0°C,
 - 14.1.9.4. vibrations that significantly exceed the usual extent of vibrations caused by transport and installation, or
 - 14.1.9.5. humidity above 80 percent or condensation inside the battery room.
 - 14.1.10. Software updates or upgrades provided and recommended by TESVOLT have not been installed.

- 14.1.11. They have been improperly altered or otherwise tampered with by the person entitled to the guarantee or third parties.
 - 14.1.12. An overvoltage has occurred in the power grid to which they are connected.
 - 14.1.13. The legal safety regulations applicable at the location of the TESVOLT storage system have not been complied with on a permanent basis.
 - 14.1.14. They have been exposed to force majeure (in particular lightning, fire, earthquakes, natural disasters) or harmful environmental conditions such as air pollution, smoke, salt water or sulphur corrosion.
- 14.2. In the cases of Section [14.1](#), it shall be sufficient if the respective circumstance is (or was) partly responsible for the impairment, damage or destruction of the product covered by the guarantee. (Contributory) Causation shall be presumed in the event of the existence of one of the circumstances specified in Section [14.1](#). The person entitled to the guarantee shall be at liberty to prove the lack of causation.
- 14.3. Claims under this guarantee are also excluded,
- 14.3.1. if the commissioning protocol is not sent to TESVOLT by mail, fax or e-mail within 31 calendar days after commissioning,
 - 14.3.2. if the guarantee claim has not been notified to TESVOLT pursuant to Sections [11.1](#) and [11.2](#) within the respective guarantee period pursuant to Section [6](#),
 - 14.3.3. if the guarantee claim has not been notified to TESVOLT pursuant to Sections [11.1](#) and [11.2](#) within ten working days after the person entitled to the guarantee has gained knowledge of the guarantee claim or should have gained knowledge without gross negligence,
 - 14.3.4. if the person entitled to the guarantee refuses TESVOLT or a qualified third party authorized by TESVOLT access to the logging file of the TESVOLT storage system, the data of the external temperature measuring device or access to the monitoring software of TESVOLT, or if the person entitled to the guarantee has manipulated or deleted the logging file, the data of the external temperature measuring device, the monitoring software of TESVOLT or data relevant for the examination of the guarantee case, or if the person entitled to the guarantee cannot provide the above mentioned information for other reason,
 - 14.3.5. if the serial number on the TESVOLT storage system can no longer be identified or has been modified, or
 - 14.3.6. if the guarantee case was caused or contributed to by the fault of the person entitled to the guarantee, its employees, agents or other vicarious agents.

15. What are the limits of the liability of TESVOLT under this guarantee?

- 15.1. Any claims in excess of the guarantee claims according to Section [10](#), in particular claims for damages and reimbursement of expenses against TESVOLT, shall be excluded from the liability of TESVOLT under this guarantee.
- 15.2. In particular, TESVOLT shall not be liable under this guarantee for damage caused by the product to other legal interests of the person entitled to the guarantee, for loss of profit or turnover, loss of use and production, business interruption, loss of data, financing costs, consequential damage or indirect damage. This shall also apply if such damage occurs to a third party.

15.3. The aforementioned exclusions and limitations of liability shall not apply in the event of liability on the part of TESVOLT due to a grossly negligent or intentional breach of duty, due to culpable injury to life, body or health or due to the violation of essential contractual obligations, i.e. obligations whose fulfilment is a prerequisite for the proper performance of the contract and whose observance the person entitled to the guarantee regularly relies on and may rely on. Damages for the breach of essential contractual obligations shall, however, be limited to the foreseeable damage typical for this type of contract, unless intent or gross negligence is involved or liability is assumed for injury to life, limb or health.

16. May the guarantee be transferred to a third party?

The guarantee including the resulting guarantee claims can only be transferred to a third party by a person entitled to the guarantee with the prior written consent of TESVOLT. However, the person entitled to the guarantee may authorize a third party to assert his claims under this guarantee.

17. When do claims under this guarantee expire?

Claims under the guarantee shall become statute-barred twelve months after TESVOLT has definitively refused to fulfil the claims asserted by the person entitled to the guarantee.

18. Which law and which place of jurisdiction do apply?

- 18.1. This guarantee agreement shall be governed by and construed in accordance with the laws of the Federal Republic of Germany. The UN Convention on Contracts for the International Sale of Goods (CISG) shall not apply.
- 18.2. The exclusive place of jurisdiction for all disputes arising from or in connection with this agreement shall be the registered office of TESVOLT.
- 18.3. Should one or more provisions of this guarantee agreement be or become invalid or unenforceable, this shall not affect the validity and enforceability of the remaining provisions of this agreement.