TS HV 70 OUTDOOR
The weather-proof all-rounder for industry and commerce

Durable • 1C charging speed • The safest cell technology
HIGH-VOLTAGE SYSTEM
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. 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.

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.
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

- Small dimensions enable space-saving installation, e. g. on customer parking lots

TECHNICAL DATA FOR OUTDOOR RACK COOLING VARIANTS

<table>
<thead>
<tr>
<th>Model</th>
<th>Cooling method</th>
<th>Min temp. (ambient)</th>
<th>Max temp. (ambient)</th>
<th>Corrosive atmosphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>closed system</td>
<td>-28°C</td>
<td>40°C</td>
<td>yes</td>
</tr>
<tr>
<td>Premium</td>
<td>closed system</td>
<td>-33°C</td>
<td>55°C</td>
<td>yes</td>
</tr>
</tbody>
</table>
**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.

![Image](411x595 to 547x651)

<table>
<thead>
<tr>
<th>Number of TS HV 70 Outdoor Racks</th>
<th>System Energy (kW)</th>
<th>Power (kW)</th>
<th>Max. discharge/charge power</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 100% DoD</td>
<td>70% EOL</td>
<td>23°C +/-5°C</td>
<td>1C/1C</td>
</tr>
<tr>
<td>3 x 100% DoD</td>
<td>70% EOL</td>
<td>23°C +/-5°C</td>
<td>0.5C/0.5C</td>
</tr>
<tr>
<td>2 x 96 kWh</td>
<td>100% DoD</td>
<td>70% EOL</td>
<td>23°C +/-5°C</td>
</tr>
<tr>
<td>1 x 96 kWh</td>
<td>100% DoD</td>
<td>70% EOL</td>
<td>23°C +/-5°C</td>
</tr>
</tbody>
</table>

**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**: 6 000
- **Cycles @ 100% DoD | 70% EOL | 23°C +/-5°C**: 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 (H x W x D)**: 1945 x 1989 x 1030 mm\(^3\)
- **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**: EN 62208, EN 62368-1, IEC 61439, IEC 62626-1K10, 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**: IP55, NEMA 3/3R

\(^1\) according to design \(^2\) SMA STPS 60: -25 to 50°C

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