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AVL DITEST

# AVL DiTEST HV SAT

## Inspection and test equipment for HV batteries and electric drives

As the requirements for electric vehicles are very extensive, universal solutions for tools are becoming increasingly important. In order to meet these requirements, AVL DiTEST has developed the versatile tool HV SAT.

The HV SAT can be used in different applications, ranging from end-of-service testing as proof that the original state has been restored, to checking the status of stored batteries and electric drives, through safety testing before further processing or disposal. You can use this tool to test, among other things, the zero voltage level, dielectric strength and insulation resistance as well as checking for leaks in a battery housing or other HV components prior to re-installation in the vehicle. The equipment comes conveniently packed in two cases.

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# AVL DiTEST HV SAT

## APPLICATIONS

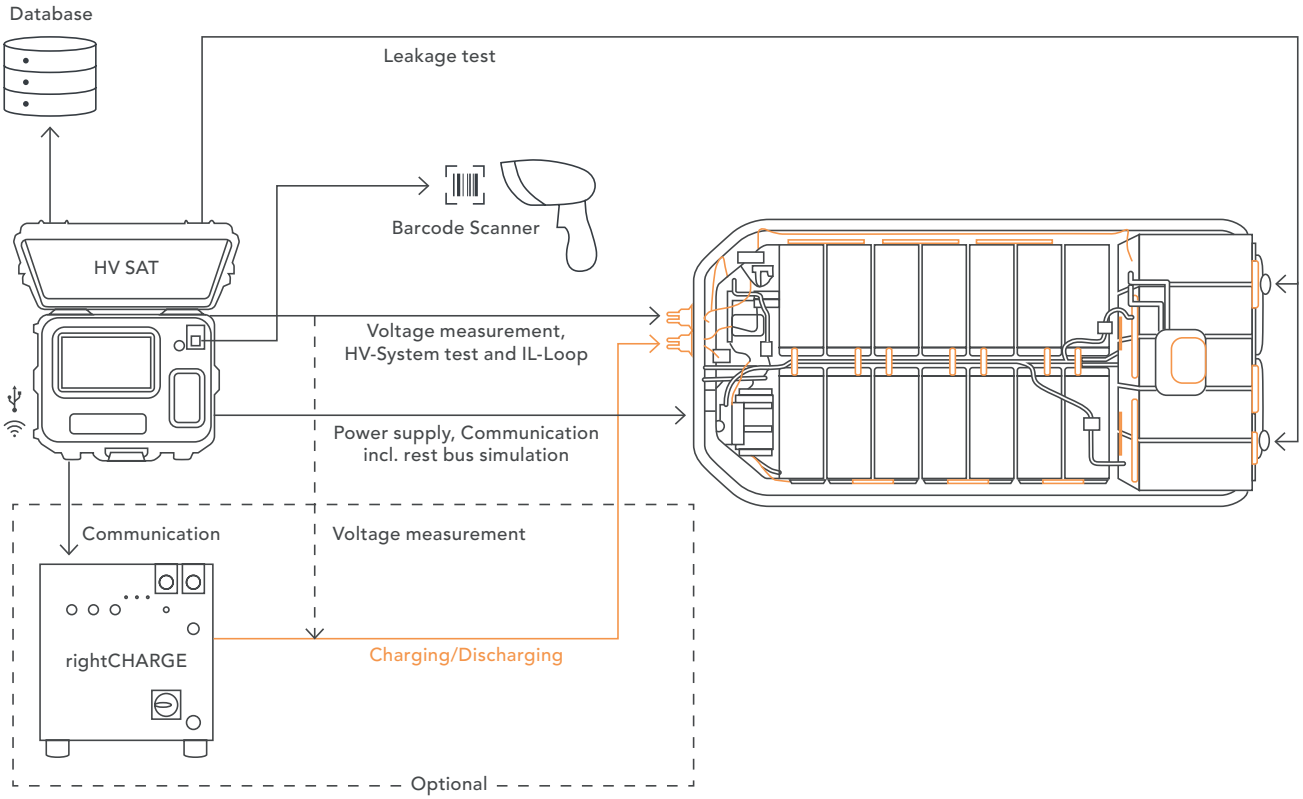
- Automated end-of-service test following repair of an HV component
- BMS voltage supply and communication
- Comprehensive safety test after battery storage
- Safety tests before further processing or disposal
- Restbus simulation for activating battery
- Testing the zero voltage level
- Testing voltage resistance
- Measuring insulation resistance
- Leakage testing on HV components – no external air supply required
- Insulation monitor testing
- Reading out or resetting fault memory in BMS
- Displaying current measured values and sending commands to the HV components (e.g. closing and reopening contacts)
- Supports HV batteries and electric drive systems up to 1,000 VDC

## OPTIONS AND EXTENSIONS:

- Extension shaft + extension connection allow for a variety of future applications
- Control of bidirectional DC power supplies for charging and discharging an HV battery

The main interface on the HV SAT is a combined socket for connecting to the test piece (HV batteries or drives). This cable is adjusted to the test object to suit the type of plug on the test piece so all functions can be carried out on an automated basis.

All adapters required for sealing purposes and running a leak test can also be supplied to match the HV battery.



# AVL DiTEST HV SAT

AVL DiTEST HV SAT is ideal for using in workshops, while its wheels also make it perfect for portable use.

## TECHNICAL DATA

| | |
|---|---|
| **General** | |
| Rated voltage | 100–240 V~ (50/60 Hz) |
| Operating temperature | +2 °C … +40 °C |
| Storage and transport temperature | -30 °C … +60 °C |
| **Technical details** | |
| HV generator (dielectric strength test and R-ISO) | 20–3300 VDC |
| Pressure test | Test pressure ± 140 mbar (12l/min free flow); test resolution 2.28 µbar |
| Intermediate circuit capacitor | 7.3 µF (incl. passive and active discharge) |
| **Standards and certification** | |
| Certification/approval<br><br>Note: Approvals are offered based on the specific customer project | EU, China, USA, Argentina, Australia, Brazil, Canada, Hong Kong, Indonesia, Israel, Japan, South Korea, Malaysia, New Zealand, Oman, Philippines, Qatar, Russia, Singapore, South Africa, Taiwan, Ukraine, UAE (as of 01/01/2024) |
| **Size and dimensions** | |
| Dimensions of HV SAT (l x w x h) | 550 x 245 x 420 |
| Dimensions of standard accessory case (l x w x h) | 550 x 205 x 420 |
| Weight of HV SAT | <17 kg |
| Weight of standard accessory case incl. contents | <7 kg |
| **Interfaces** | |
| Connection to HV batteries and other HV components | Combination socket for:<br>› HV interfaces<br>› Leak measurements<br>› Low-voltage communications connector for battery communication incl. BMS voltage supply, activating the battery, diagnostics, restbus simulation and rest of vehicle simulation (CAN-FD, PWM signals, etc.) |
| Tablet/PC docking interface | USB 2.0 incl. 19 VDC supply voltage |
| Extension connection | USB 2.0 incl. 12 VDC supply voltage |
| Extension shaft | For accommodating customer-specific extension units |



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