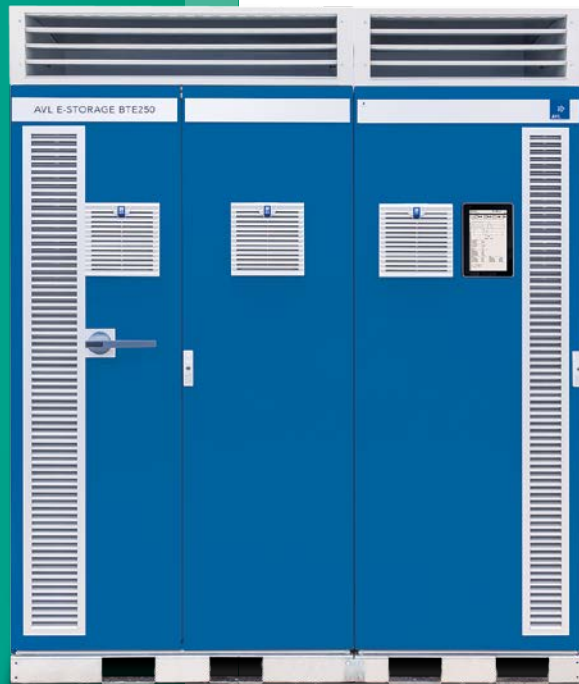


The AVL logo consists of the letters 'AVL' in a bold, white, sans-serif font, positioned to the left of a stylized white icon. The icon is a circular arrangement of five teardrop-like shapes, each containing a smaller version of the same teardrop shape, creating a recursive pattern.

AVL E-STORAGE BTE™ 1,200 V

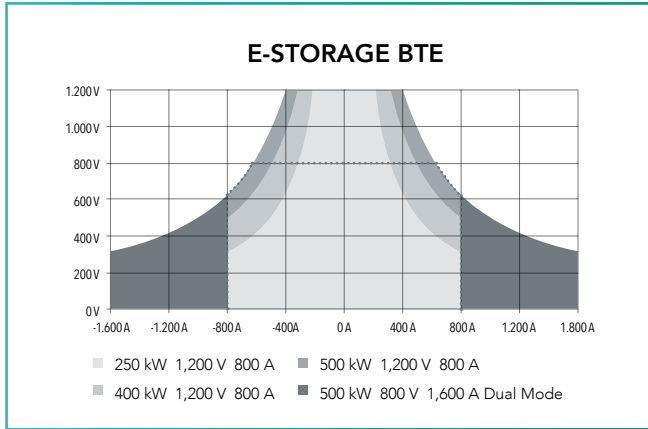
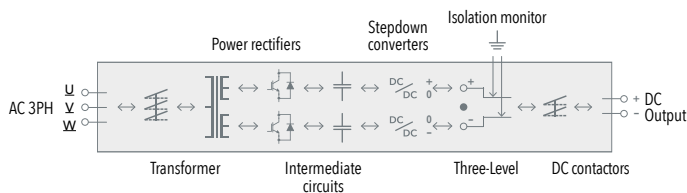
Join us in exploring new e-horizons

The AVL E-STORAGE BTE™ offers high dynamic and accurate solutions for versatile applications: from battery tests to battery emulation and from single components up to complete electrified powertrain testing.

Thanks to its unique control strategy for outstanding control accuracy and stability, the E-STORAGE BTE enables the most realistic emulation of a battery, or it can be used to reproduce high dynamic charge and discharge load profiles for battery testing. The minimal influence on the test results by the system performance ensures system and time accuracy for exact replays of driving profiles. These valid test results end up in a highly efficient testing process and time savings. Additionally, the system can be used as a highly stable voltage source.

By optimizing the control strategy, realistic battery modeling can be realized via AVL's standalone RT solution or integrated into AVL's automation platform. AVL's battery models (Mobat) enable the E-STORAGE system to behave like a real battery (based on calculation at cell, module and pack level). Due to different models, test runs for multiple testing scenarios can be replicated.

Another highlight of the E-STORAGE BTE is its outstanding versatility. Automated configuration changes in the Power Distribution Switch Box (PDSB) reduce the testbed downtime and result in a higher testbed utilization. The PDSB allows for the fully automated switching between testbeds and/or the parallelization of systems without any manual modifications. The remote control via CAN bus allows for integration into the automation system. The integrated web-GUI interface provides remote system parametrization and online diagnostics.



E-STORAGE BTE offers a dual mode operation. Depending on the application, the system can run units under test with lower voltage and higher current (800 V, 1,600 A) or units under test with higher voltage and lower current (1,200 V, 800 A). The dual mode can be changed via automation system remotely.

To be compliant with latest test runs, AVL's automation software (AVL PUMA 2™ and AVL LYNX 2™) facilitate the recording of reproducible measurement data across the entire development process. The automation platforms provide the possibility to integrate any subsystems on the testbed. The complete test equipment and the unit under test can be controlled and monitored in fully automatic and manual operation.

BENEFITS AT A GLANCE

- Unique control strategy for realistic battery testing and emulation enables outstanding control accuracy and stability
- High system versatility with automated configuration changes reduces testbed downtime
- Flexible dual mode switching offers tailored features based on the application
- Simple to operate due to integration in AVL testbed automation software

SPECIFICATION

Power rating	250, 400, 500 kW ¹⁾
AC input voltage	3 × 380–480 VAC
AC input frequency	47–63 Hz
DC output voltage	12–1,200 V
DC output current	± 600 A, ± 800 A ¹⁾ ± 1,600 A ²⁾
Current rise time (+ 10 % ... + 90 %)	2 ms ³⁾ 1 ms ³⁾
Interface	1 Mbps CAN bus (1 kHz cycle time; others on request)
Measurement accuracy	
Voltage	± 100 ppm RMS FS ⁴⁾ (1,200 V)
Current	± 100 ppm RMS FS ⁴⁾ (± 600 A, ± 800 A, ± 1,600 A)
Ambient conditions	
Operating temperature	5 ... 40 °C
Installation altitude	0 ... 1,000 m ASL
Maximum relative air humidity (non-condensing)	85 %
Protection class	IP43, IP54
Dimensions	
Dimensions (incl. 200 mm plinth); WCS incl. water conditioning cabinet	250 kW, 1,200 V ACS: 2,807 × 610 × 2,478 mm 250 kW, 1,200 V WCS: 3,407 × 610 × 2,618 mm 400 kW, 1,200 V WCS: 4,207 × 810 × 2,618 mm 500 kW, 1,200 V WCS: 4,207 × 810 × 2,618 mm
Conformity (CE)	
EMC	2014/30/EU Electromagnetic compatibility
Standards	EN 61439-1/2; EN 60146-1-1; EN 55011; EN 61000-2-4; EN 61000-4-2; EN 61000-4-4; EN 61000-4-5; EN ISO 12100; EN ISO 13849-1; EN 60204-1
Directives	2014/35/EU (Low voltage directive) 2011/65/EU Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment

¹⁾ 250 kW available as ACS (air-cooled system) with 600 A output current, and 250 kW, 400 kW and 500 kW as WCS (water-cooled system) with 800 A output current
²⁾ Dual mode: with high current of 1,600 A and max. 800 V, or 800 A and max. 1,200 V
³⁾ At nominal conditions in single operation
⁴⁾ FS = Full Scale

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FIND OUT MORE

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