Simpro has developed a specific automatic control station with a view to increasing the quality and efficiency of the production of batteries for electrical energy accumulation. This system can be used for End-of-Line production tests of battery packs in order to detect:

- assembly defects;
- BMS communication faults;
- internal power switch faults;
- irregularities in the battery balancing circuits/consistency
- performance data.

Main features:
- Specifically designed for the battery production line.
- Analyses valid also for battery pack Research & Development activities.
- The field of application of this system includes all types of battery modules for electric and hybrid vehicles.
- Ensured increase of QA efficiency of the part being produced.
- Complete inspection of the BMS system.

Electrical available tests:
- Insulation:
  - terminal insulation resistance (HV+, HV-);
  - ground isolation
  - $R_i$ (insulation resistance) threshold values are sufficient to avoid hazardous situations for the workers.
- Power: measurement of the battery pack internal resistance by examining the voltage after a strong current injection (or discharge) in/from the battery.
- Voltage:
  - measurement at the level of HV input/output battery pack terminals.
  - conformity check of the battery pack output voltage compared with the threshold values.
- VAT: voltage absence test.
- Charge / Discharge: circuit suitability check through a grid regeneration system for the electrical energy harnessed during discharge.

As well as any other system manufactured by Simpro, the supply of this test bench is turnkey and includes after-sales service, operators’ training, maintenance and prompt intervention in case of need.