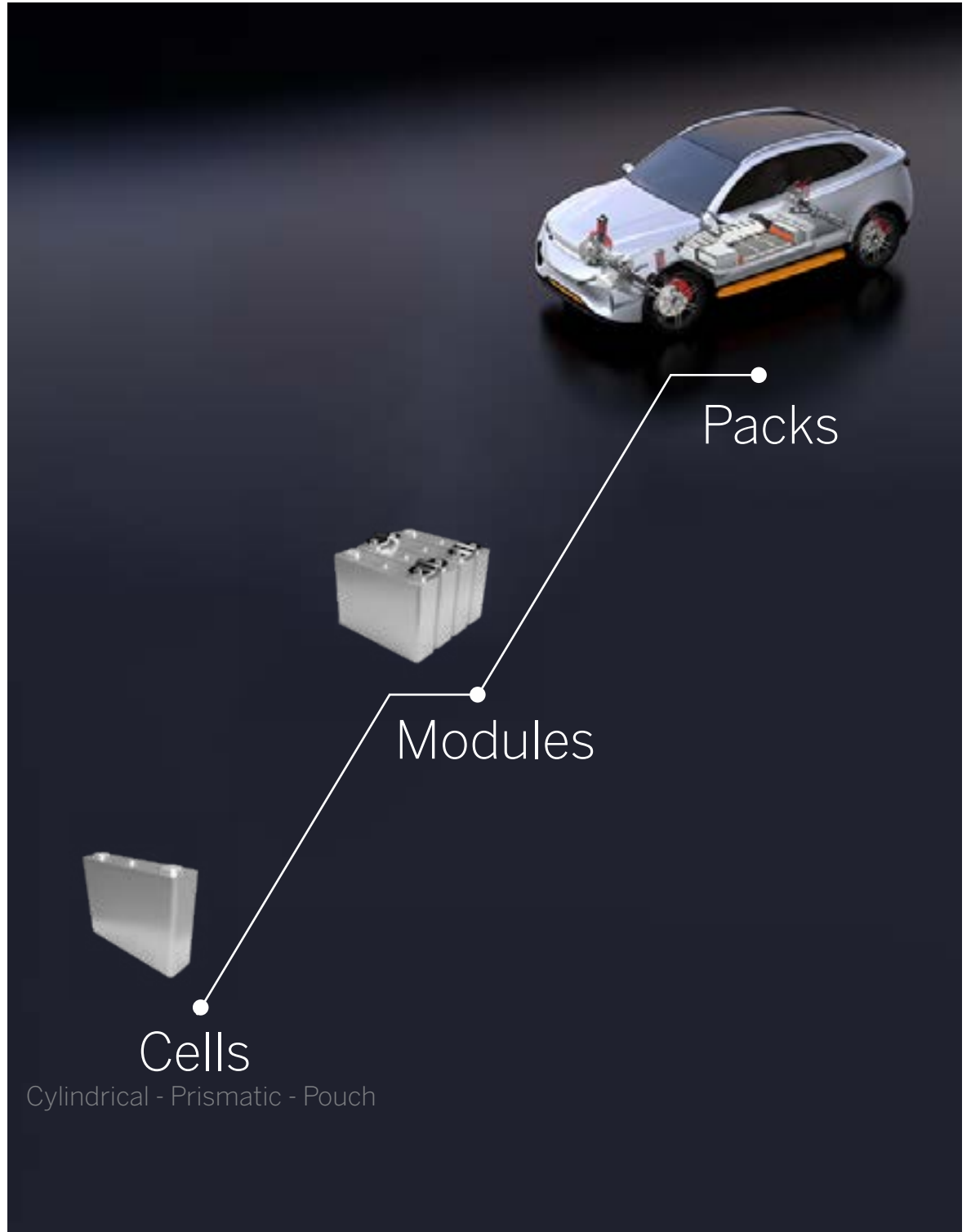


# EV. TEST SYSTEMS

## Battery Test Systems



# Electric Vehicle (E.V.) Battery Test Systems

## Description

ATS has vast experience with EV battery cells and processes for automation production including test systems. Our knowledge with high-speed requirements and overall EV automation leadership provides a strong solution for battery production needs. ATS is a global automation leader with the size and experience required to support through the complete life cycle of a battery program.

### Cell Test:

- Open Circuit Voltage (OCV)
- AC & DC Internal Resistance (IR)
- Weld Resistance

### Module Test:

- IsoSPI communication
- Weld and Busbar resistance  $\mu\Omega$
- Individual Cell Voltage & calibration
- Individual Thermistor Temperatures
- Total OCV
- DC Internal Resistance (DCIR)
- Leak test
- Cell Self Discharge
- HiPot

### Pack Test:

- CAN & Flexray communication
- All Module Cell and Thermistor
- All Battery Energy Management (BEM) HV power control / isolation
- Flashing of BEM
- Charge / Discharge @ 1C
- DCIR @ 2 - 4C
- HiPot
- Leak test

## Specifications

### Cell

- Cycle time > 25 cells per second
- ACIR 0-10  $\Omega$ ,  $\pm 0.5\text{m}\Omega$
- OCV 0-5VDC,  $\pm 30\mu\text{V}$

### Module

- Weld resistance, 0 to 10m $\Omega$ ,  $\pm 30\mu\Omega$
- OCV: 100V,  $\pm 40\text{mV}$
- DCIR: 160V, 440A, 40kW,  $\pm 5\text{mV}$
- Hipot: 6.5kV, 0.25%

### Pack

- Charge/Discharge: 800V, 400A, 200kW
- Load Regulation: 10 mV, 10 mA
- Programming Accuracy: 400 mV, 450 mA
- Measurement Accuracy: 50 mV, 120 mA
- Transient response: 500  $\mu\text{s}$

## Features

- **Customizable design to meet specific customer requirements.**
- **Gauge capable with minimized cycle times.**
- **ATS Test executive software backbone:**
  - **Powerful user customization, Programmable and configurable through scripting environment**
  - **Pass fail determination based on user configurable settings around each measurement made.**
  - **Data is archived for easy recollection.**
  - **Intuitive visual tools - color-coded results, displays, messaging graphs and diagnostic features.**
  - **Incorporating readily available Industry standard measurements devices including Keysight and National Instruments products.**



Cylindrical Cell

Prismatic Cell

Pouch Cell

Contact ATS directly for custom or product specific applications beyond the scope of this document.



Tel: 1-(905)-850-8600 ext. 83279

Fax: 1-(905)-850-9336

Send e-mail to: [atstest@atsautomation.com](mailto:atstest@atsautomation.com)

or visit our web site at: [www.atsautomation.com](http://www.atsautomation.com)

© 2019 ATS, and other designated trademarks used are a trademark of ATS Automation Tooling Systems Inc. All rights reserved. Please note, technical specifications are subject to change. Any third party trademarks referenced herein are the property of their respective owners.  
August 2019