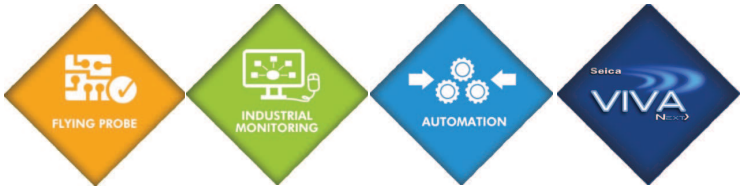


PILOT NEXT LINE

PILOT BT NEXT

The increasing demand from the Electric Vehicles (EV) battery industry for electric cars has changed the high-volume production battery arrays test.
To meet the most complex technical needs, Seica has designed and developed the PILOT BT flying prober, the latest addition to the NEXT SERIES, which is a validated, verified and completely automated system to test full-size EV lithium-ion battery packs.

The EV battery manufacturers produce many types of battery families with different physical shapes and electrical characteristics. The PILOT BT is designed to guarantee a maximum *testing area of 1050 mm x 865 mm (41.33 ” x 34.05 ”)* in order to accommodate all types of battery packs through a Seica’s conveyor system or a custom system designed or chosen by the customer.

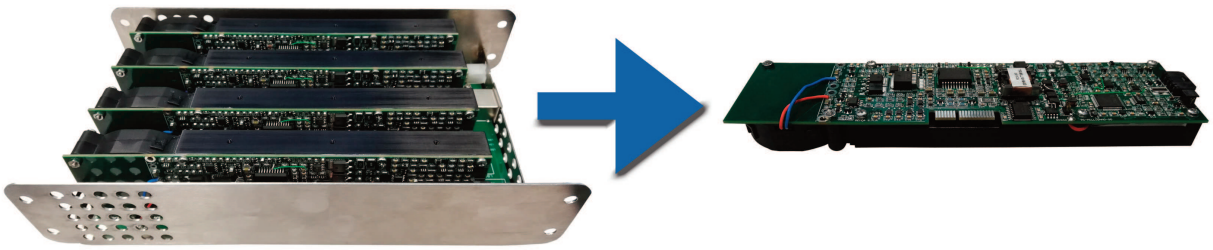
Direct measurements on the four flying heads

The system features up to 4 independent test heads driven with synchronous brushless motors (XYZ), to provide a high-level dynamic response. Each one of the four heads features a mini fixture to test up to four individual cells in a single movement in either an X or Y axis orientation.

Flying mini-fixture: 4-wire kelvin test

The aim of the tester is to measure one of the most important parameters of the battery: the bonding resistance.
Each one of the four mini-fixtures is equipped with:

- Four thermally stabilized and insulated resistance meters, which enable the measurement of the bonding resistance of a single battery cell to the common plate. It is possible to discriminate mΩ resistor values with 1 $\mu\Omega$ resolution and high accuracy.
- A 200 MHz Digital Signal Processor (DSP) for processing the analog measurements to ensure fast and efficient data processing through a 1 Gigabit Ethernet connection with the system PC.



VIVA NEXT› is available in a 32 and 64 bit version with a new graphical interface and a guided environment for an easy and quick test program creation. It is fully integrated with NI-VISA drivers and with third-party test management software.

VIVA>NEXT› Software and MES integration Option

Like any other **Seica** solution, the PILOT BT NEXT› test system, uses the VIVA>NEXT› platform, which provides two authentication methods managed through the Seica proprietary graphic editor MY VIEW:

1. The standard Windows authentication
2. The new 'VIVA User Authentication' through which the customer can select the user with different privileges.

Since the customer manages the production and material flow through the MES software, the Seica PILOT BT NEXT› can be connected to the customer MES (Manufacturing Execution System). Through its proprietary Adapter, Seica can integrate all customer MES platforms.

Industrial Monitoring & Industry 4.0

The Information and technology needed to collect and analyze data, is key to the successful digitalization of the manufacturing process, which is at the heart of the **Industry 4.0** concept. Special attention needs to be given to energy savings and predictive monitoring of events. **Canavisia**, a Seica Company, introduces *ShoeBox*, a noninvasive control unit that allows to control energy consumption and to reduce costs and wastes through Monitoring of consumption, Data analysis, Intervention planning.

TECHNICAL TABLE

System Architecture	Horizontal
DUT Loading/unloading	Automatic, fixed rail
Size-adjustable battery conveyor system	Option
Max mobile resources	4 on each head (Optional: 8 on each head)
Laser sensor	Yes
HD color camera	High-resolution cameras
Lighting unit	RGB
Marker Tool	Optional
Barcode reading	Optional
ICT Test	Yes, 4-wire Kelvin Test
SMEMA	Compatible
Temperature	23 ± 5 °C
Humidity	Min. 20% - Max. 80%
Power Supply	400 VAC, (16 A) 50-60 Hz Single-phase
Power Consumption	Max. 2.5 kW
Weight	1800 kg
Dimensions (Length x Width x Height)	**(1850 x 1800 x 1796) mm** (1)
PC/Operating System	Industrial PC – I5, Windows10 64 bit configuration
Software Architecture	VIP platform - VIVA Next>
Automatic Test Generation	Yes
Autodebug	Yes
Parallel Test Capabilities	Yes, Up to 16 battery cells tested simultaneously
Data Input Format	CAD Data
Active Test Area	**(1050 x 865) mm (41.33" x 34.05")**(2)
Maximum Battery Height	1200 mm
Max number of measurable Cells	2400 cells/min

(1) *Height without lamp buzzer*

(2) *Depending on the battery layout*

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