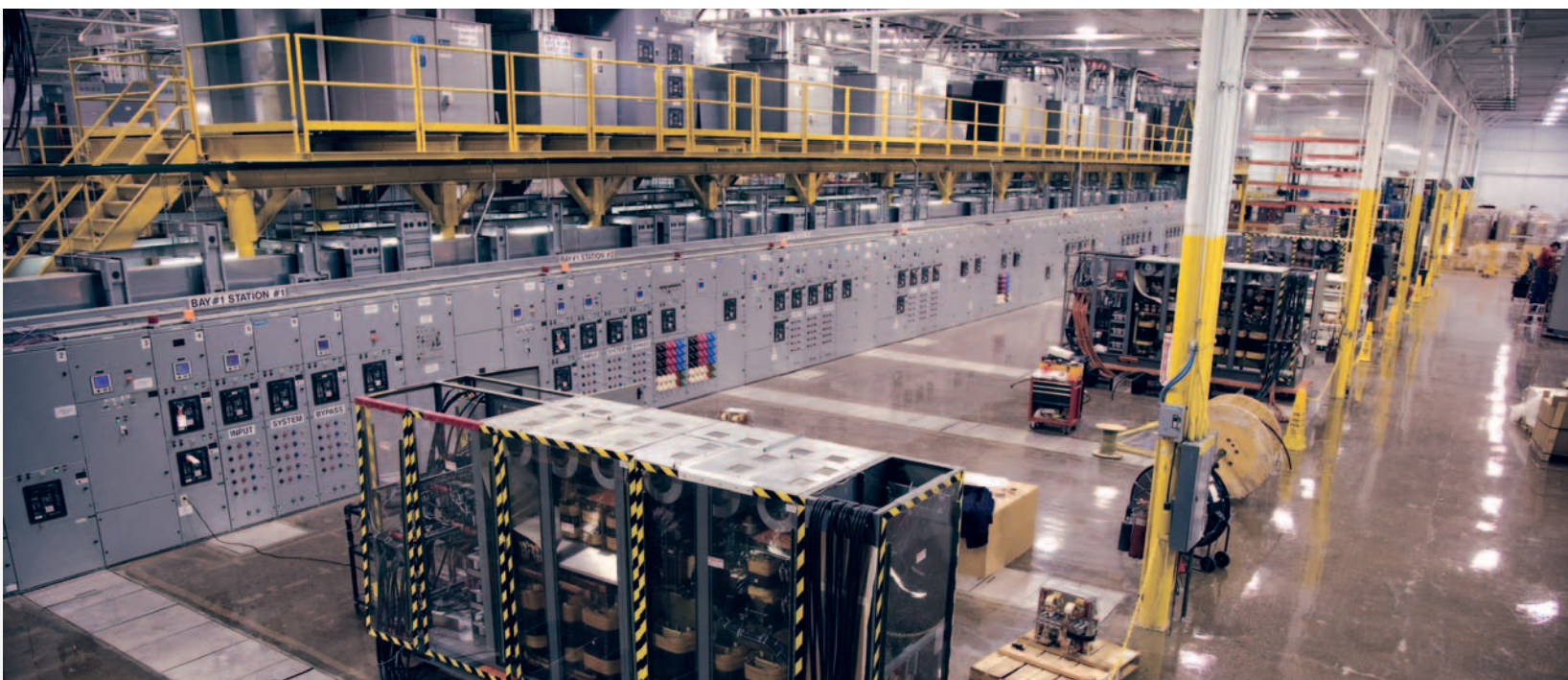
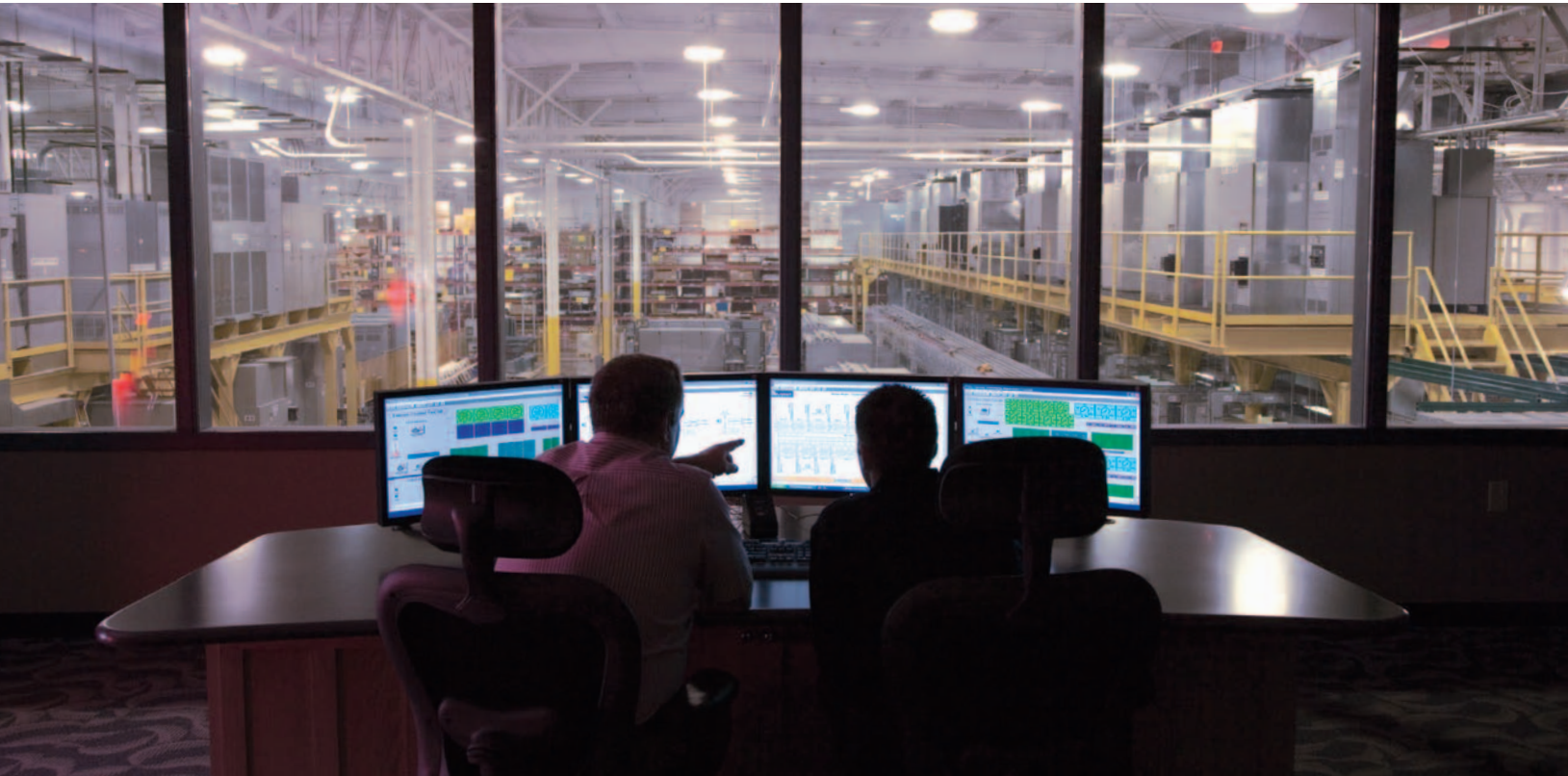


# Liebert Adaptive Power Witness Test Center





## Power-Packed Testing Center Proves Business-Critical Reliability

The Liebert Adaptive Power Witness Test Center for large UPS systems is a state-of-the-art test facility designed to provide customers with pre-installation testing of the performance, interoperability, and efficiency of Liebert power modules and systems under a variety of conditions. Located in Delaware, Ohio, the 25,600 square-foot facility, including a 2,600 square-foot customer observation station, is the largest and most comprehensive in the industry.

Testing includes individual modules as well as the complete power system—including large UPS modules such as the Liebert 610 system and associated support systems—and is essential to the smooth, rapid installation and commissioning of large power systems. Customers leave the Liebert Adaptive Power Witness Test Center with documented proof and confidence that their multi-module power system will seamlessly operate in accordance with business-critical availability requirements.

# Test Capacity and Performance of Liebert Power Solutions

The Liebert Adaptive Power Witness Test Center for large UPS systems consists of four test stations in each of four test bays. Testing is customized based on the complexity, size and number of UPS components in the configuration, but always includes analysis of every module as well as the entire system. Module and system tests include:

- **Steady-state** – 0% to 100% plus overload, unbalanced loading; non-linear loading
- **Dynamic** – 0% to 100% (0%, 25%, 50%, 100%) step loads plus overload, unbalanced loading; non-linear loading
- **Overload and faults** – (>100%, 110%, 125%, 150%, >200%)
- Plus other customer-specified special test requirements.

Testing is conducted on large Liebert UPS systems, which may include UPS power modules, input and output switchgear, power distribution units, static transfer switches, Liebert FS flywheels, and battery cabinets.

Test results certify the characteristics of input and output, AC and DC. Performance measures against specifications include, but are not limited to:

- Voltage and waveform
- Voltage regulation
- Voltage and current harmonics
- Frequency
- Current and waveform
- I/O power factor
- Efficiency from kW in and out

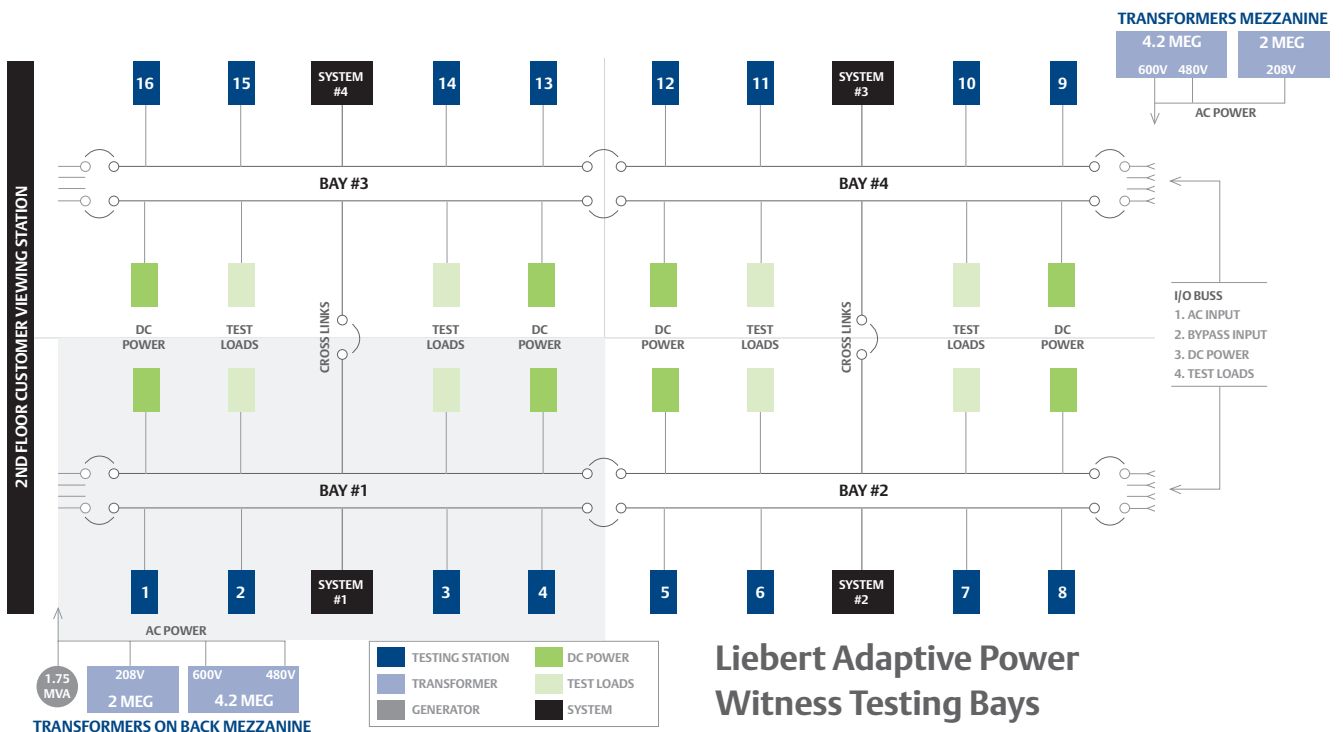
**Customers may request special tests in addition to the above.**



## View the Entire Testing Process

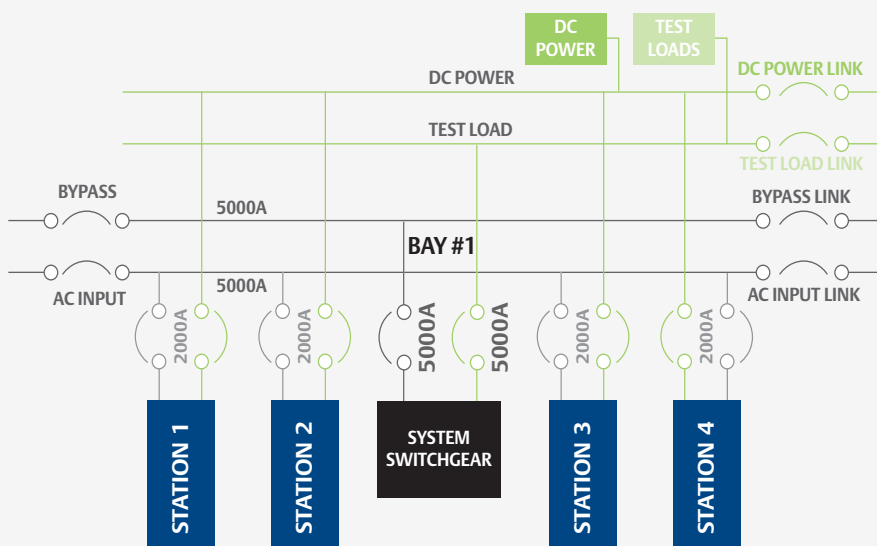
Comprehensive large UPS system testing is usually conducted over a five-day period. During testing, customers and consulting engineers may oversee the entire process from the witness test center observation station which overlooks the test bays. Four LCD panels offer easy access to real-time test data, including waveforms, testing procedures and results. Once testing is completed, a hardcopy report of the results is provided.

The Liebert Witness Test Center features four test bays, each containing four test stations, where module and complete system analysis is conducted in full view of the customer.



## Liebert Adaptive Power Witness Test Center Features

- Four test bays, each containing four distinct test stations.
- Witness test viewing station overlooking test bays and equipped with LCD panel displays that offer easy access to relevant test data.
- Results are provided at the conclusion of each test.
- All I/O circuit breakers are remotely controlled.
- Voltage, current, frequency and watts monitored on all I/O circuit breakers.
- Total power of 8 MW available via the facility utilities.
- Higher capacities supported through a 1.75 MW 50/60 Hz engine generator as well as plug-ins for additional generators.



## Testing Capabilities per Station

- 1 MVA UPS Module
- 1.5 MW Restive Load
- 0.8 pf Lagging Inductive Load
- 0.9 pf Leading Capacitive Load
- Non-Linear Load
- 208, 480 or 600 VAC I/O
- 5000A Load Bus Capacity
- DC Battery Simulator

# Learn More About the Liebert Adaptive Power Witness Test Center

The Liebert Adaptive Power Witness Test Center is just one more reason Emerson Network Power is the global leader in enabling Business-Critical Continuity™.

Contact your local Liebert Representative or Liebert Network Solutions Partner to learn more about the capabilities of the Liebert Witness Test Center or to arrange a tour of the facility.

## Liebert Corporation

1050 Dearborn Drive  
PO Box 29186  
Columbus, OH 43229  
USA  
800 877 9222 (USA and Canada)  
614 888 0246 (outside US)  
614 841 6022 Fax

## Liebert Adaptive Power Witness Test Center

975 Pittsburgh Drive  
Delaware, OH 43015  
USA  
740 363 3300 Phone

## Via Leonardo Da Vinci 8

Zona Industriale Tognana  
35028 Piove Di Sacco (PD)  
Italy  
39 049 9719 111 Phone  
39 049 5841 257 Fax

## Emerson Network Power Asia Pacific

7/F, Dah Sing Financial Centre  
108 Gloucester Rd, Wanchai  
Hong Kong  
852 25722201 Phone  
852 28029250 Fax

[www.Liebert.com](http://www.Liebert.com)

Emerson Network Power, the global leader in enabling business-critical continuity, ensures network resiliency and adaptability through a family of technologies including Liebert power and cooling technologies that protect and support business-critical systems. Liebert solutions employ an adaptive architecture that responds to changes in criticality, density and capacity. Enterprises benefit from greater IT system availability, operational flexibility, and reduced capital equipment and operating costs.

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