

NEW PRODUCT/APPLICATION HIGHLIGHT

THE HOME APPLIANCE TEST SYSTEM PTS-WPWTSLT/-AT

THERMOTRON®

291 Kollen Park Drive
Holland, Michigan 49423
Phone (616) 393-4580
Fax (616) 392-5643
www.thermotron.com
info@thermotron.com

A leading home appliance manufacturer recently purchased several home appliance test systems from Thermotron. They needed the ability to test any type of circuit board or circuit board assembly for a variety of products. In response to their requirements, Thermotron developed a test system that easily tests electronic components from all models and sizes, of washers, dryers, dishwashers, refrigerators, freezers, microwaves, ovens, etc. The goal was to find a multi-purpose test solution that could detect warranty failures quickly and cost efficiently. By deploying several testers to lab and assembly facilities, failed products will not have to be shipped to a remote location for testing, effectively saving time and money.



The completed tester is easy to integrate in a lab or assembly environment

Shipping and installation of the equipment into the testing facilities was easy and hassle-free. Testing began immediately following installation. In less than 6 months, the company is already considering purchasing another round of similar, but updated test systems. The new tester is forecasted to allow testing of more product types and will include parametric testing in addition to functional testing.



The versatile Home Appliance Test System can test a variety of appliances.

WHAT WAS SOLD?

The purchase order included two model types. The Lab Tester's purpose was to test failed products sent back from the field. The second model type was the Assembly Tester which was installed in assembly plants for quality control purposes. The Lab Tester's computer was more powerful and had the option to add extra modules to test more than two products at a time.

"We went from testing one sample set in 4-6 days to testing the same sample size within an hour because we can now consolidate our testing routine."

-Test Engineer

The system includes:

- **Console**
 - Three variable resistors to simulate temperature sensors and resistive temperature devices (RTD). This is used to mimic temperature controls on an actual product and allows for testing within specific simulated temperature ranges.
 - Load boards to test varying voltages, currents, etc.
 - Over 30 output channels worth of DC/AC voltage
 - Over 30 input channels of high, medium and low voltage monitoring points
 - Sturdy folding shelf used as a work surface for product manipulation
- **Custom cables** designed to connect to different circuit boards. Thermotron manufactured cables for each product type (i.e. washers, dishwashers, microwaves, etc.) that connects and disconnects quickly from the test product.
- **Controller and Software**

The PTS-WPWTS uses a 19" monitor and PC to control test situations. Thermotron collaborated with the company's engineers to configure the National Instruments LabView and TestStand software to conform with their testing needs. This software can test two different products independently and simultaneously.

FEATURES AND BENEFITS

"Our old system was archaic compared to this tester. We can define and find more failures now because we have more flexibility in designing the tests."

-Test Engineer

- **Flexibility** - The PTS-WPWTS can test many different products. The hardware can support the testing of any appliance, as long as a test profile is designed. The tester can also seamlessly integrate with a Thermotron chamber to simulate the temperature and humidity that the product would typically undergo. It can be used in a lab or assembly setting, and can also be slightly modified for use in Europe.
- **Increased Productivity** - Using the Lab Tester our customer was able to increase test volume at least fivefold. The test facility went from testing 20

products per week to 100 products per week. By being able to test for more failures, more data can be quickly relayed to the design department and as a result, the products on the market will potentially see less warranty failures.

- **Easy to Use** - The custom cables allow testers to quickly switch circuit boards, whether testing different product types or multiple circuit boards of the same product type. Pre-configured test profiles for each product type make the test system easy for any user to operate once training is completed.
- **Multiple Product Testing** - This equipment can test two products at once, giving the technicians the ability to save time while customizing each test situation.
- **Mobility** - Its size allows the Warranty Test System to mold easily into any test environment and casters allow for easy mobility. *Note: The new batch of testers is designed to be more compact in order to move and install easier.*



Custom cables are easily connected and disconnected from multiple circuit boards

DESIGN CHARACTERISTICS

Console Exterior Dimensions: 48" W x 54" D x 75" H / 122cm x 137cm x 190cm

Electrical Power Requirements: 50 amps on 240/1/60

THERMOTRON®

291 Kollen Park Drive
Holland, Michigan 49423
Phone (616) 393-4580
Fax (616) 392-5643
www.thermotron.com
info@thermotron.com