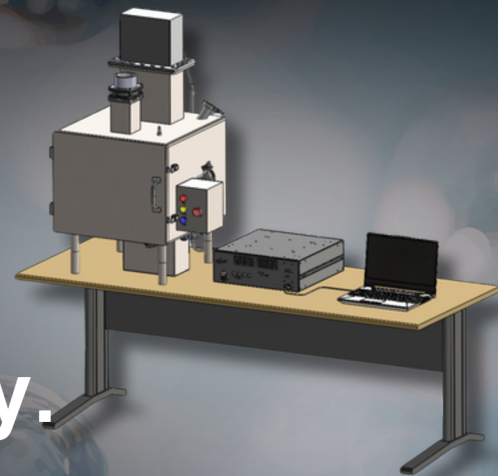


Precision Control. Repeatable Results. Unmatched Flexibility.



LabWave™ Solid-State Microwave Power Test System for unmatched *control, versatility, and performance*—so you can test and innovate from lab and scale to field with confidence.

Built on Crescend Technologies' solid-state microwave expertise, the LabWave Test System helps you optimize thermal processes, test material interactions, and validate product performance with confidence.



PrecisePower™ Control

Adjustable output from 0–2.5 kW with <1 W resolution. Fast response time and closed loop control when installed with PID controller.



Solid-State Reliability

No magnetrons, no tubes to fail. Extended lifetime with minimal maintenance.



Frequency Agility

Tunable across 902–928 MHz to optimize process performance.



Quick On/Off & Instant Warm Up

On/off 100ms or less. Warm up Instant versus waiting for gas ovens or magnetrons.



Adaptive Power Control

Automatic power control to adjust changing operating conditions.



Pulse Mode

Consistent, repeatable microwave bursts with precise timing—something magnetrons can't match.

Reduce scale-up risk by developing with solid-state at 902–928 MHz— the frequency of choice for high-power microwave applications.

Using the 902–928 MHz frequency band for your development enables testing with larger sample sizes, as it delivers ~ 2–3X deeper energy penetration vs conventional 2.45 GHz laboratory systems.

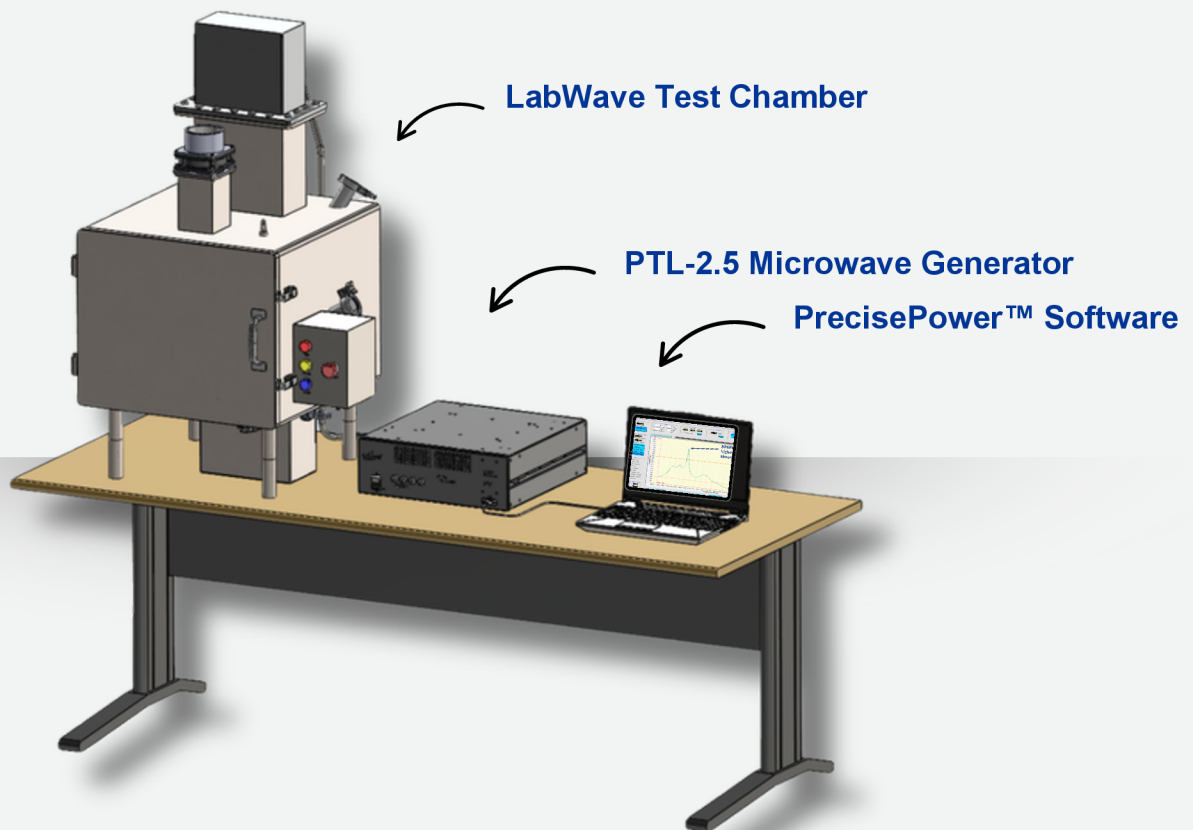
Accelerate Research & Development

With Precision Microwave Testing

The LabWave Test System delivers a controlled environment for evaluating how solid-state microwave energy impacts your material helping you discover breakthroughs in energy reduction, throughput, and process optimization.

This versatile lab test chamber offers many features for a wide variety of use cases. The tabletop design is a perfect companion to Crescend's PTL-2.5 desktop microwave generator.

Engineered for precision and repeatability, the LabWave Test System provides granular control of every process parameter— frequency, power, and atmosphere— so you can isolate variables and study true material response. Built for researchers and process developers, it transforms microwave testing from trial-and-error into measurable, reproducible science.



LabWave Test Chamber

**Designed for Versatility.
Built for Performance.**



Purpose-built to pair with Crescend's PTL-2.5kW solid-state microwave generator.

This integrated solution offers precise energy delivery control that can be precisely tuned within the 902 -928 MHz band to match the frequency to the specific dielectric properties of your materials. The result is consistent, uniform heating and complete command over your thermal processes, from initial testing through process development.

High Temperature Capacity

Capable of processing a wide range of demanding thermal applications — making it ideal for heat-treating specialty metals, materials science, and manufacturing R&D in a controlled lab setting.

When paired with our Crescend PTL-2.5 microwave generator the programmable multi-step recipe control allows for shorter cycle times.

Integrated Accessory Ports

Designed with real-lab use in mind. 4 tri-clamp ports for sensors and other instrumentation can provide real-time monitoring of temperature, pressure, and more.

Precise control for repeatable experiments. Immediate feedback ensures tight process control and immediate anomaly detection.

Precise Power Control

When paired with our Crescend PTL-2.5 microwave generator, the patented PrecisePower™ software allows for precise control of frequency, temperature and other process parameters.

The ability to adjust the frequency within the 902 - 928 MHz ISM band allows for tuning to the load in the chamber.

Built-in Safety Features

The e-stop push button and contacting door interlock switch are tied into the PTL-2.5's emergency stop circuit, providing enhanced safety with near instantaneous shutdown if an unsafe condition occurs.

Consistent, Uniform Heating

Optional removable rotary table that ensures 360° exposure to microwaves, eliminating potential hot and cold spots.

Easily removable rotary table offers versatility for different test setups.

The rotary table in combination with the frequency sweeping capability of the PTL-2.5 provides optimal uniform, controlled heating.

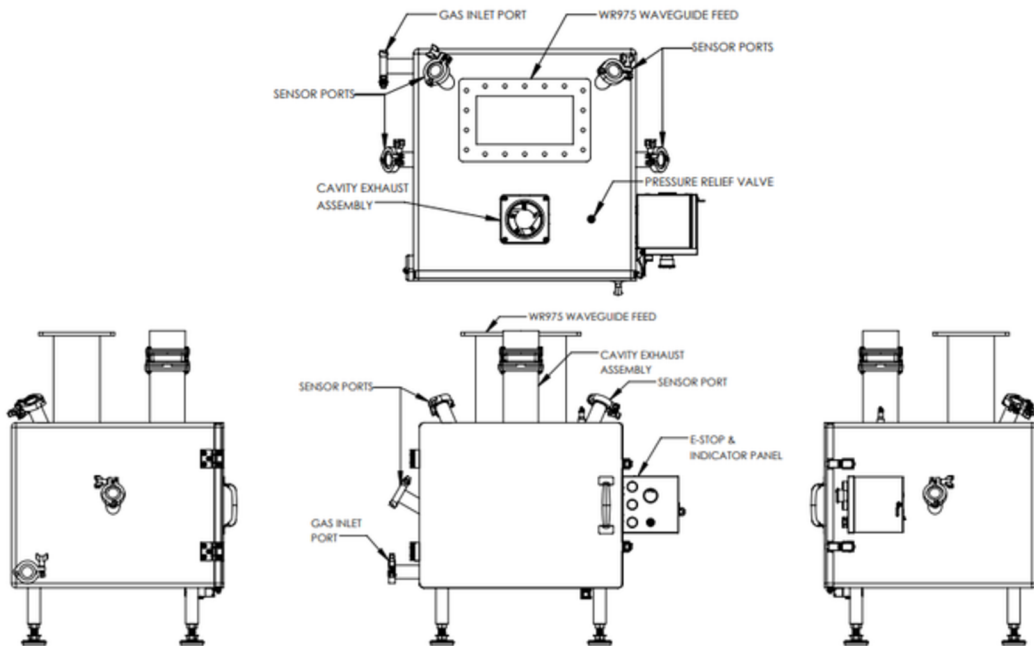
Inert Gas Atmosphere Capable

Process sensitive alloys and reactive materials with confidence using the available gas ports to introduce inert gasses into the airtight chamber.

Enables controlled, oxygen-free environments, prevents oxidation and contamination during process.

Ideal for high-value materials, metal powders and reactive compounds.

The LabWave Test Chamber is engineered for precision, versatility and repeatability, delivering uniform microwave energy, tight process control, and reliable results for every test.



Features

- Exterior dimensions
- Interior dimensions
- Interior volume
- Door Opening
- Construction material
- Instrumentation ports
- Gas tri-clamps
- Input feed
- Frequency band
- Microwave leakage
- Safety
- Temperature range
- Door interlock
- Viewing window
- Power
- Temperature rating

Optional Accessories

- Turntable kit
- Pressurization kit
- IR pyrometers
- Thermal imager
- Video camera
- Very high temperature test kit

Specifications

- 32.65" W [829.18] x 27.16" D [689.87] x 32.36" H [618.73]
- 22.15" W [562.61] x 21" D [533.4] x 22.15" H [526.61]
- 5.9 cubic feet / 168.76 L
- 16" [406.4] x 16" [406.4]
- Heavy duty 304 stainless steel cavity and door
- Six (6) 1.5" [38.1] tri-clamp
- Two 3/4" [19.06] ports
- WR-975 waveguide feed
- 902 - 928 MHz ISM band, adjustable
- < 1.0 mw/cm² at 2.5 kW
- Interlock with generator
- Ultra-high temperature capability, contact us for info
- Magnetic, normally closed switch
- 11.5" [292.10] x 11.5" [292.10]
- Rated for 2.5kW
- Process dependent, door rated to 105° C/221° F

Hardware Requirements :

- Microwave generator
- Computer

*The LabWave™ Test Chamber is currently in the prototype stage of development. All specifications, performance data, and measurements referenced are based on design models and preliminary testing. Actual performance may vary, and specifications are subject to change without notice. Final product features, capabilities, and configurations will be validated and confirmed upon completion of production engineering and testing phases.