



THE BEST IN TEST

NGC TESTING SERVICES

ACOUSTICAL | FIRE | STRUCTURAL | ANALYTICAL

AFTER 50 YEARS, WE'VE RUN A LOT OF TESTS. NO WONDER WE'RE THE BEST.



SAVE TIME. SAVE MONEY. GET CERTIFIED.

For over 50 years, NGC Testing Services has provided the most efficient and cost-effective solution for full-scale fire, acoustical, structural/physical and analytical testing, all housed in one fully-accredited facility.

First-in-class testing technology combined with state-of-the-art labs provide you with a superior testing experience. Whether you are testing building materials or space shuttle valves, NGC Testing Services has the equipment and expertise to get your materials certified.

Stay in one place instead of traveling to different facilities to do different tests. With over 53,000 square feet dedicated to full-scale fire, acoustical, structural/physical and analytical testing, you can save time and money by getting all your testing done without ever leaving Buffalo. When it comes to testing, we're the answer.



SPECIFICALLY DESIGNED FOR SUPERIOR TESTING.

All our tests are done in compliance with established test standards and will allow you to get even the most unique materials fully certified. From acoustical testing of floor coverings, to fire testing of mass transit cars from a global clientele, the NGC Testing Services facility was built to handle testing both big and small. Some of the features of the facility include:

- Full-scale, floor-ceiling furnace built into the floor
- Nine, fully-isolated independent acoustical chambers, built on springs
- High-capacity overhead cranes to accommodate any type or size of material
- Large access openings
- Large open areas allowing for freestanding, large-scale tests
- Full-scale wall furnace

ACCREDITATIONS/LISTINGS*

NVLAP Accredited: Lab Code: 200291-0

IAS Accredited**: Testing Laboratory 216

City of New York, OTCR (MEA) Acceptance Laboratory, No. 102-1-L

California State Fire Marshall

Approved Testing Laboratory

Florida Building Commission

Approved Product Testing Laboratory

Ohio Board of Building Standards

Recognized Testing Laboratory

UL's Third-Party Test Data Program (TPTDP)

Acoustical Testing

ISO/IEC 17025 Compliant

Our laboratory provides test programs, from the developmental stage through the certification process, conducted in accordance with standards developed by ASTM, ULC, NFPA, UL, FM, ICC, ISO, AAMA, ANSI and SAE.

*The specific tests accredited or listed by each organization may be referenced in the scope under our lab's identification or code number.

**IAS is a subsidiary of ICC.



ACOUSTICAL TESTING

Our acoustical laboratory features nine full-scale, fully-isolated independent test chambers complete with a sophisticated control room so multiple tests can be completed concurrently. With all these resources, we can provide quick turnarounds at an overall low cost.

We also have 50+ pre-built, movable, floor-ceiling test assemblies and are continuously adding more custom assemblies. As of now, we do a majority of the industry's floor-ceiling testing, and, of course, we do it fast.

- Partition Sound Transmission Loss Chambers: Sound Transmission Class (STC)
- Ceiling Attenuation Chambers: Ceiling Attenuation Class (CAC)
- Sound Absorption Chamber: Noise Reduction Coefficient (NRC)
- Sound Transmission Chamber: Evaluating pipe-lagging systems, smaller-scale sound transmission tests and automotive barriers
- Floor-Ceiling Chambers: Sound Transmission Class (STC), Impact Insulation Class (IIC) and Reduction in Impact Sound Transmission (Delta IIC), with multiple test frames and overhead crane capabilities
- Hemi-Anechoic Test Chamber: Articulation Class (AC) and Interzone Attenuation (IA)
- Miscellaneous: Additional facilities for developing custom test programs to evaluate acoustical performance of a wide range of products

TEST CAPABILITIES

- ASTM E90:** Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements (ISO 140, Part 3)
- ASTM E413:** Classification of Rating Sound Insulation (STC)
- ASTM E1111:** Measurement of the Interzone Attenuation of Open Office Components
- ASTM E1332:** Standard Classification for Determination of Outdoor-Indoor Sound Attenuation (OITC)
- ASTM E1408:** Measures the Sound Transmission Loss of Door Panels and Door Systems
- ASTM E1414:** Standard test for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum (ISO 140, Part 9)
- ASTM C423:** Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method (ISO 354)
- ASTM E1222:** Test for the Insertion Loss of Pipe-Lagging Systems
- ASTM E492:** Test for Impact Sound Transmission through Floor-Ceiling Assemblies using the Tapping Machine
- ASTM E2179:** Test for the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
- ASTM E989:** For Determination of Impact Transmission Class (IIC)
- ASTM E1110:** For Determination of Articulation Class (AC)
- SAE J1400:** Automotive Barriers
- ANSI S12.31/ISO 3741:** To Determine Sound Power Levels of Broad-Band Noise Sources in Reverberation Rooms
- ASTM E795:** Standard Practices for Mounting Test Specimens During Sound Absorption Tests

ANALYTICAL TESTING

We also offer the most advanced equipment for analysis, identification and development of a wide variety of materials. We offer the following equipment for analytical and physical testing:

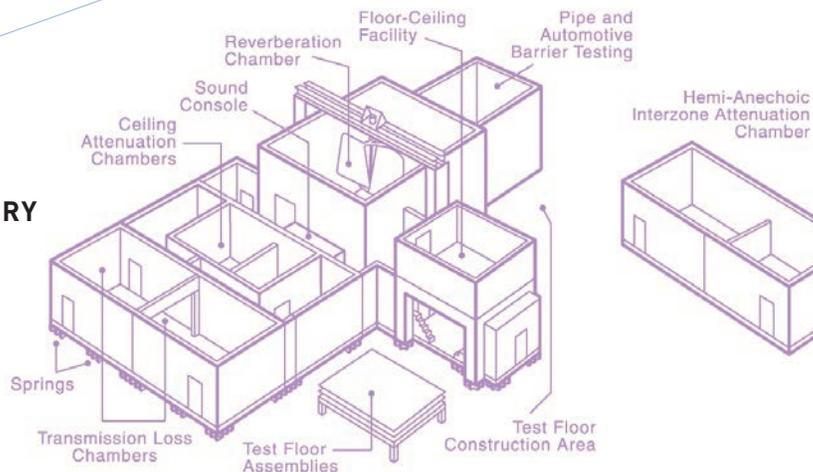
- X-Ray Diffraction
- Scanning Electron Microscopy (SEM)
- Particle Size
- Mineral Analysis
- EDAX Elemental Analysis (EDX)
- Inductively Coupled Plasma (ICP)
- Wet Chemistry

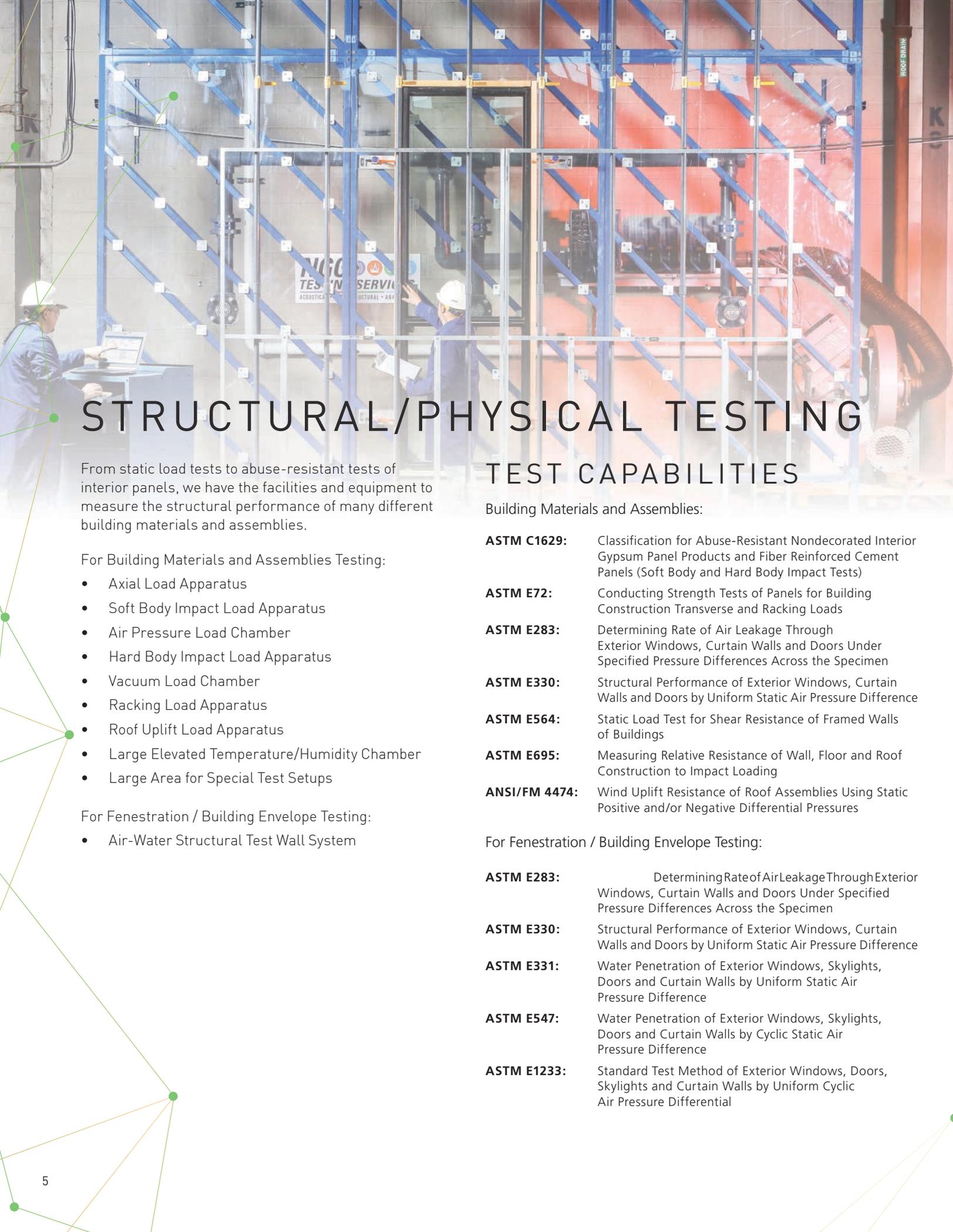
TEST CAPABILITIES

- ASTM E96:** Water Vapor Transmission of Materials
- ASTM C518:** Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus (R-Value)

ACOUSTICAL LABORATORY TESTING COMPLEX

Our acoustical laboratory has been engineered to complete full-scale tests on a wide range of products.





STRUCTURAL/PHYSICAL TESTING

From static load tests to abuse-resistant tests of interior panels, we have the facilities and equipment to measure the structural performance of many different building materials and assemblies.

For Building Materials and Assemblies Testing:

- Axial Load Apparatus
- Soft Body Impact Load Apparatus
- Air Pressure Load Chamber
- Hard Body Impact Load Apparatus
- Vacuum Load Chamber
- Racking Load Apparatus
- Roof Uplift Load Apparatus
- Large Elevated Temperature/Humidity Chamber
- Large Area for Special Test Setups

For Fenestration / Building Envelope Testing:

- Air-Water Structural Test Wall System

TEST CAPABILITIES

Building Materials and Assemblies:

- ASTM C1629:** Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber Reinforced Cement Panels (Soft Body and Hard Body Impact Tests)
- ASTM E72:** Conducting Strength Tests of Panels for Building Construction Transverse and Racking Loads
- ASTM E283:** Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E330:** Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference
- ASTM E564:** Static Load Test for Shear Resistance of Framed Walls of Buildings
- ASTM E695:** Measuring Relative Resistance of Wall, Floor and Roof Construction to Impact Loading
- ANSI/FM 4474:** Wind Uplift Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures

For Fenestration / Building Envelope Testing:

- ASTM E283:** Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E330:** Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference
- ASTM E331:** Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference
- ASTM E547:** Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Difference
- ASTM E1233:** Standard Test Method of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Cyclic Air Pressure Differential



FIRE TESTING

Fully equipped for full-scale fire testing of building materials, structures and components, we provide you with an exceptional testing experience. Our fire testing lab is designed for even your largest materials, with high-capacity cranes, multiple movable test frames and large access openings, giving you the option to test any material, big or small. In addition to our range of testing capabilities, all of our fire testing is compliant with ASTM standards.

Other fire testing equipment in our facility includes:

- Full-Scale (14' x 18') Horizontal Floor-Ceiling Furnace: With full specimen loading and cycling and data-acquisition system
- Pilot Scale (5' x 5') Horizontal Furnace: With full data acquisition system for exploratory or smaller specimen tests
- Full-Scale (10' x 10') Vertical Wall Panel Furnace: With full specimen loading and cycling and data-acquisition system
- Full-Scale 25' Steiner Tunnel Furnace: Flame spread and smoke-developed index
- Full-Scale Two-Story Fire Test Structure
- Vertical Tube Furnace: Non-combustibility of materials
- Room Corner Burn Fixture
- Instrumented Room for evaluating heat shields and surface protection
- Miscellaneous: Large open area for conducting free standing, large-scale tests or special test setups; laboratory for small-scale fire tests and custom evaluations

TEST CAPABILITIES

- ASTM E84:** Surface-Burning Characteristics of Building Materials (NFPA 255, UL 723, UBC 8-1)
 - ASTM E119:** Fire Tests of Building Construction and Materials (UL 263, UBC 7-1, NFPA 251)
 - ASTM E136:** Behavior of Materials in a Vertical Tube Furnace at 750°C
 - ASTM E814:** Fire Tests of Penetration Firestop Systems (UL 1479, UBC 7-5)
 - ASTM E2336:** Fire-Resistive Grease Duct Enclosure Systems
 - ASTM E2768:** Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)
 - NFPA 285:** Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Combustible Components
 - NFPA 130:** Standard for Fixed Guideway Transit and Passenger Rail Systems (Chapter 8.5)
 - NFPA 252:** Fire Tests of Door Assemblies (UL 10 A-B-C, ASTM E152, UBC 7-2, UBC 7-3)
 - NFPA 257:** Fire Tests of Window and Glass Block Assemblies (UL 9, ASTM E163, UBC 7-4)
 - NFPA 415:** Standard on Airport Terminal Buildings, Fuel Ramp Drainage and Loading Walkways
 - UBC 26-2:** Evaluation of Thermal Barriers (NFPA 275)
 - UBC 26-3:** Room Fire Test Standard for Interior of Foam Plastic Systems
 - UL 1618:** Wall Protectors, Floor Protectors and Hearth Extensions (Reduced Clearance Test for Wall Protectors)
 - UL 1715:** Fire Test of Interior Finish Material
 - UL 2079:** Tests for Fire Resistance of Building Joint Systems (ASTM E1966)
 - CAN/ULC-S101:** Fire Endurance Tests of Building Construction and Materials
 - CAN/ULC-S115:** Fire Tests of Firestop Systems
 - CAN/ULC-S632:** Standard for Heat Shields (Appliance Clearance Reduction Test and High Temperature Test)
- Fire tests for safes, security boxes or other protective enclosures**
Custom small-scale fire tests and evaluations



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