Predictable Field Chambers

ETS-Lindgren's Predictable Field Enclosures are designed to provide acoustic and statistical energy analysis, to optimize the engineering and design requirements needed for noise control of an end-product application.

To approximate the sound field found in a hemi-anechoic chamber without the use of wedges, the walls and ceiling in a predictable field enclosure are manufactured with several inches of sound absorbing material.

Predictable field enclosures provide an engineering or survey-grade sound field (dependent on enclosure size), for sound power testing. While precision-grade sound power testing requires a hemi or full anechoic chamber, a predictable field enclosure provides an economical solution for engineering or survey grade tests allowed by many standards.

This acoustic chamber or enclosure is used primarily for design engineering and product development. Predictable field enclosures are also used for sound intensity testing, where their primary function is to control ambient noise and increase measurement accuracy by reducing reflections.

Predictable field enclosures can be installed with or without acoustical floors, however for maximum sound isolation performance, an isolated floor system should be used.

Key Features

- Provides an Acoustically Controlled Environment for Engineering-Grade Testing
- Noise Control and Noise Emission Testing
- Sound Absorption Testing
- Transmission Loss Testing
- Sound Power Testing
- Production Line Testing
- Sound Isolation

Product Features

Engineering Level Testing

ETS-Lindgren's Predicable Field Enclosures are a perfect solution for engineering-grade sound power measurements performed in accordance to ISO 3744.

Acoustically Controlled Environment for Testing

ETS-Lindgren's system provides a sound absorptive environment and high noise reduction. These features allow for repeatable and accurate measurement without the need to worry about interference from outside noise sources.

Applications

- Quality Assurance Sound Pressure Level Measurements (Product Line)
- Sound Quality Measurements and Evaluations of Components
- Sound Power
- Sound Pressure Measurements of Product Noise Emissions Allows Comparative Measurements to be Made with a Reference Design or Reference Sound Source

- Computer Sound Level Emissions
- Pass/Fail Quality Control of Small or Medium Sized Electrical, Audio, or Mechanical Parts
- Engineering Design where a Precision-grade Sound Field is Not Required
- Audio Production
- Critical Listening
- Noise Isolation

Applicable Test Standards

- ISO 3744
- ISO 3746
- ISO 7779
- ANSI S12.54

Specifications

Physical Specifications

Model P1
Chamber DIMs Outside (L x W x H) Baseline Enclosure: 2.03 m x 1.42 m x 2.59 m (6 ft 8 in x 4 ft 8 in x 8 ft 6 in), Without Isolated Floor: 2.03 m x 1.42 m x 2.41 m (6 ft 8 in x 4 ft 8 in x 7 ft 11 in)
Excludes wall or ceiling mounted ventilation silencers - allow an additional 30.5 cm (12 in)
Chamber Dims Inside (L x W x H) 1.83 m x 1.22 m x 2.31 m (6 ft x 4 ft x 7 ft 7 in)
Estimated Weight 998 kg (2,200 lb)
Ventilation 200 CFM
Applications Quality Control Comparative Analysis, Sound Power and Sound Pressure of Small Parts

Model P2
Chamber DIMs Outside (L x W x H) Baseline Enclosure: 2.64 m x 2.03 m x 2.59 m (8 ft 8 in x 6 ft 8 in x 8 ft 6 in), Without Isolated Floor: 2.64 m x 2.03 m x 2.41 m (8 ft 8 in x 6 ft 8 in x 7 ft 11 in)
Excludes wall or ceiling mounted ventilation silencers - allow an additional 30.5 cm (12 in)
Chamber Dims Inside (L x W x H) 2.44 m x 1.83 m x 2.31 m (8 ft x 6 ft x 7 ft 7 in)
Estimated Weight 1,542 kg (3400 lb)
Ventilation 200 CFM
Applications Sound Power and Sound Pressure of Auto and Computer Parts and Small Parts

Model P3
Chamber DIMs Outside (L x W x H) Baseline Enclosure: 3.25 m x 2.64 m x 2.59 m (10 ft 8 in x 8 ft 8 in x 8 ft 6 in), Without Isolated Floor: 3.25 m x 2.64 m x 2.41 m (10 ft 8 in x 8 ft 8 in x 7 ft 11 in)
Excludes wall or ceiling mounted ventilation silencers - allow an additional 30.5 cm (12 in)
Chamber Dims Inside (L x W x H) 3.05 m x 2.44 m x 2.31 m (10 ft x 8 ft x 7 ft 7 in)
Estimated Weight 2,495 kg (5,500lb)
Ventilation 300 CFM
Applications Engineering Test of Small Electrical and Mechanical Parts

Model P4
Chamber DIMs Outside (L x W x H) Baseline Enclosure: 3.86 m x 3.25 m x 2.59 m (12 ft 8 in x 10 ft 8 in x 8 ft 6 in), Without Isolated Floor: 3.86 m x 3.25 m x 2.41 m (12 ft 8 in x 10 ft 8 in x 7 ft 11 in)
Excludes wall or ceiling mounted ventilation silencers - allow an additional 30.5 cm (12 in)
Chamber Dims Inside (L x W x H) 3.66 m x 3.05 m x 2.31 m (12 ft x 10 ft x 7 ft 7 in)
Estimated Weight 3,175 kg (7,000 lb)
Ventilation 300 CFM
Applications Engineering Test of Small Electrical and Mechanical Parts

Model P5
Chamber DIMs Outside (L x W x H) Baseline Enclosure: 4.47 m x 3.86 m x 2.59 m (14 ft 8 in x 12 ft 8 in x 8 ft 6 in), Without Isolated Floor: 4.47 m x 3.86 m x 2.41 m (14 ft 8 in x 12 ft 8 in x 7 ft 11 in)
Excludes wall or ceiling mounted ventilation silencers - allow an additional 30.5 cm (12 in)
Chamber Dims Inside (L x W x H) 4.27 m x 3.66 m x 2.31 m (14 ft x 12 ft x 7 ft 7 in)
Estimated Weight 4,082 kg (9,000 lb)
Ventilation 300 CFM
Applications Engineering Test of Small Electrical and Mechanical Parts

Model P6
Chamber DIMs Outside (L x W x H) Baseline Enclosure: 5.08 m x 4.47 m x 3.33 m (16 ft 8 in x 14 ft 8 in x 10 ft 11 in), Without Isolated Floor: 5.08 m x 4.47 m x 3.15 m (16 ft 8 in x 14 ft 8 in x 10 ft 4 in)
Excludes wall or ceiling mounted ventilation silencers - allow an additional 30.5 cm (12 in)
Chamber Dims Inside (L x W x H) 4.88 m x 4.27 m x 3.05 m (16 ft x 14 ft x 10 ft)
Estimated Weight 4,990 kg (11,000 lb)
Ventilation 300 CFM
Applications Engineering Test of Small Electrical and Mechanical Parts, Audio Component Testing

Product Options

- Equipment Mounts (Wall or Ceiling)
- Automatic Door Opener
- Access Hatches
- Exhaust Fan for Gas Evacuation
- Special Door Hardware
- Variable Speed Fan
- Acoustic Mini Wedges

Product Configuration

- Modular Steel Isolated Floor
- Modular 10.16 cm (4 in) or optional 15.24 cm (6 in) Steel Panels
- Ventilation Silencers for Fan or HVAC Connections (Wall or Ceiling Mounting Locations)
- Recessed Lighting
- Acoustically Treated Cable Penetrations
- Personnel Door