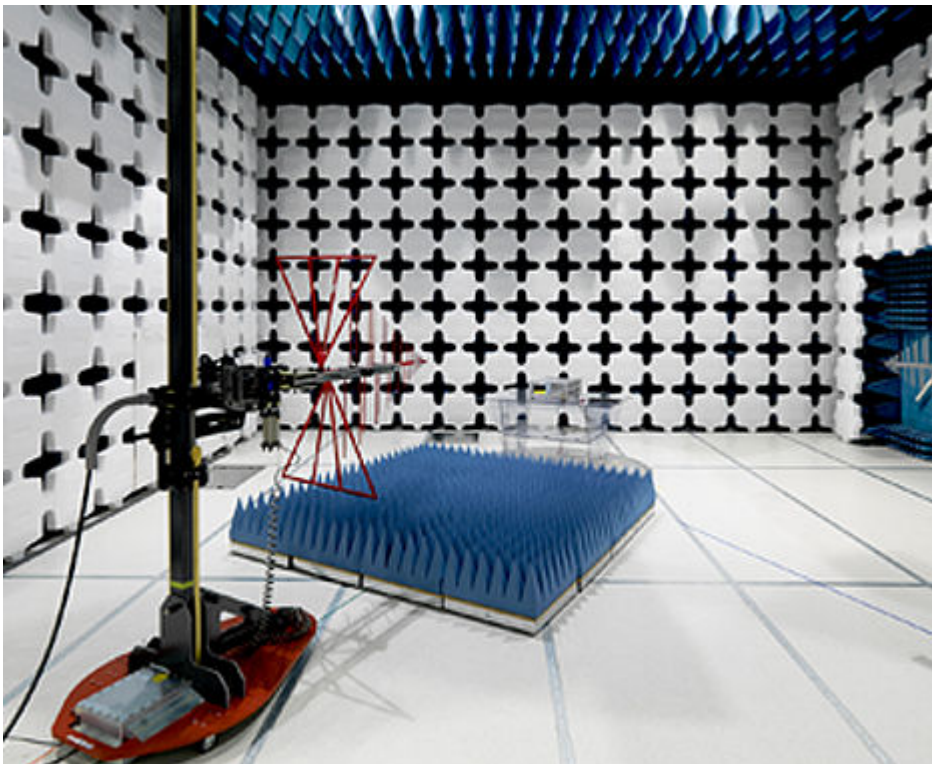


# FACT 5 Chambers



## Key Features

- 26 MHz to 40 GHz Frequency Range
- Emissions and Immunities Measurements
- Full Compliance Testing for Radiated Emissions:
  - ANSI C63.4
  - FCC Parts 15 and 18
  - EN 50147-2
  - CISPR 11/EN55011
  - CISPR 16/EN55016
  - CISPR 22/EN55022
  - CISPR 32/EN55032
  - VCCI V-3/2003.04
  - SAE J551
  - SAE J1113 (Requires Chamber Modification to Accommodate Full Vehicle)
- Full Compliance Testing for Radiated Immunity:
  - IEC 61000-4-3/EN61000-4-3
  - SAE J551
  - SAE J1113
- Eligible for FCC 3m Class B Facility Filing
- Available NSA Performance Options (May Require Chamber Modifications):
  - 4.0 dB
  - Plus 3.5 dB
  - Premium 3.0 dB
- Available as a Turnkey Package:
  - Chamber
  - Tower
  - Turntable
  - Antennas

ETS-Lindgren's FACT 5 Meter EMC Chambers, for Full Compliance testing, offer the semi-anechoic radiated emissions (RE) and fully anechoic radiated immunity (RI) compliance test capability for most international EMC compliance regulations. FACT 5 Chambers offer the ability to perform RE testing at a 5-meter distance while preserving the ability to perform full compliance testing of applicable 3-meter standards. Results obtained with 5-meter distance have better correlation to those obtained at a 10-meter distance than the ones measured at 3-meter distance.

FACT 5 chambers achieve their broadband performance using a unique arrangement of hybrid and ferrite tile absorber. The design was modeled using the proprietary numerical electromagnetic software responsible for creating chambers that set new standards for anechoic performance

FACT5-1.2	FACT5-1.5	FACT5-2.0
1.2m QZ	1.5m QZ	2.0m QZ
4.0dB NSA	4.0dB NSA	4.0dB NSA
	FACT5-1.5-Plus	FACT5-2.0-Plus
	1.5m QZ	2.0m QZ
	3.5dB NSA	3.5dB NSA
		FACT5-2.0-Premium
		2.0m QZ
		3.0dB NSA

- Instrumentation
- Software

Product Features

Radiated Emissions Testing

ETS-Lindgrens FACT 5 chambers are designed to provide customers with more standardized solutions for different quiet zone diameters and performance options. This will provide users more flexibility to choose which solution works best for their individual needs. The available quiet zone sizes are available up to 3 meters in diameter.

FACT 5 chambers can be used to perform full compliance testing for ANSI C63.4, FCC Parts 15 and 18, EN 50147-2, CISPR 11/EN 55011, CISPR 16/EN55016, CISPR 22/EN55022, CISPR 32/EN55032, VCCI V-3/2003.04, SAE J551 and SAE J1113. ETS-Lindgren guarantees that the performance of Normalized Site Attenuation (NSA) testing according to ANSI C63.4 with 5 meter test distance, is 4.0 dB for STANDARD chamber, 3.5 dB for STANDARD PLUS chamber and 3.0 dB for PREMIUM chamber over the frequency range of 30 MHz to 1 GHz. The guaranteed performance for Site VSWR (sVSWR) test per CISPR 16-1-4 (ANSI C63.4) for frequency range of 1 GHz to 18 GHz is < 6.0 dB, regardless which performance option is selected below 1 GHz.

Radiated Immunity Testing

FACT 5 chambers can also be used to perform full compliance testing for IEC 61000-4-3/EN61000-4-3, SAE J-551 requirements. At 3 meter test distance lengths, Field Uniformity (FU) of 0 to 6 dB can be achieved over the frequency range of 26 MHz to 18 GHz. The test aperture for FU is a vertical plane of 1.5 m x 1.5 m at an elevation of 0.8 m to 2.3 m above the ground plane, following the field uniformity test procedure of IEC 61000-4-3. Additionally, used absorber material can safely withstand continuous field intensity of up to 200 V/m and intermittent field intensity of up to 500 V/m. This safely exceeds the field intensity requirements of commercial RI tests.

Optional Turnkey Systems

ETS-Lindgren can supply a fully integrated test system for your needs. With ETS-Lindgren, you work alongside a single, accountable partner with a proven track record of success. At systems level, our integrated RF measurement solutions are specifically designed to meet the requirements of a particular test standards. Our objective is always the same when we are designing the test system: listen carefully to our clients requirements, and then respond with proven solutions that minimize risk and assure success.

Specifications

Electrical Specifications
Frequency Minimum: 26 MHz
Frequency Maximum: 40 GHz
ANSI C63.4 Normalized Site Attenuation: 30 MHz to 40 GHz

Product Options
Chamber Options
<ul style="list-style-type: none"><li>• Fully Integrated Test System to Meet the Requirements Of A Particular Test Standard</li><li>• Shielded Control Room</li><li>• Shielded Amplifier Room</li><li>• Model LDT-1.5 Low Dielectric Table</li><li>• 30 cm (12 in) and 45 cm (18 in) Raised Floors</li><li>• Low Profile Door Sill</li><li>• Sliding Door</li><li>• CCTV Monitoring System</li><li>• Intercom System</li><li>• Fire Detection And Suppression System</li><li>• Other Door Options Available</li></ul>

- Anti-static Vinyl Floor Tile
- Additional RF Filtering
- Company Logo Screen Printed Onto White Caps
- Immunity Interlock Switch
- Electrical Distribution
- Heating, Ventilation, And Air Conditioning (HVAC) System
- Seismic Structural Design Calculations And Certification

Chamber Acceptance Testing Options

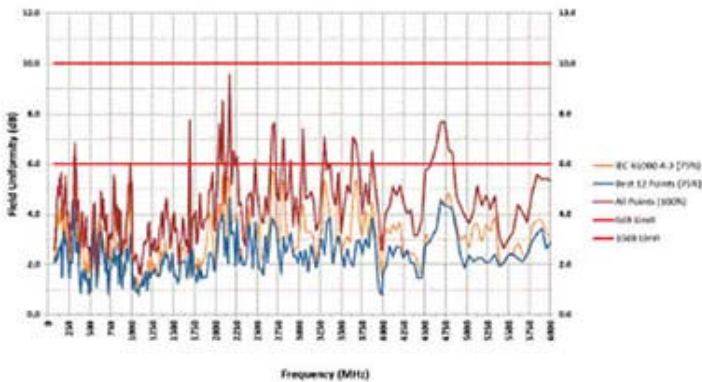
- FU Test per IEC 61000-4-3 From 80 MHz to 1 GHz
- FU Test per IEC 61000-4-3 From 1 GHz to 18 GHz
- NSA Test (3 meter) per ANSI C63.4/CISPR 16-1-4 From 30 MHz to 1 GHz
- NSA Test (5 meter) per ANSI C63.4/CISPR 16-1-4 From 30 MHz to 1 GHz
- sVSWR Test per CISPR 16-1-4/ANSI C63.4 From 1 GHz to 18 GHz

Product Configuration

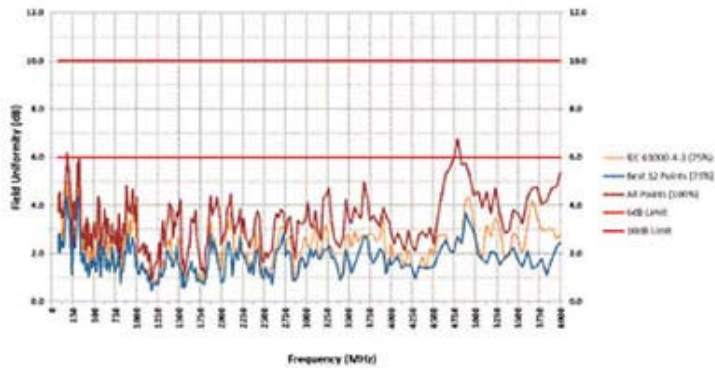
- Design and Fabricate RF-shielded Enclosure
- Installation of the Enclosure and Absorber
- One Single-leaf, Manually Operated, RF-shielded Personnel Door
- Raised, Reflective Ground Plane
- Access Hatches in Raised Floor, Nominally 30 cm (12 in) x 30 cm (12 in)
- Waveguide Vents, Nominally 30 cm (12 in) x 30 cm (12 in)
- 50/60 Hz Power-line Filters for EUT, Lights, Antenna Tower and Turntable
- Connector Panels, Nominally 15 cm (6 in) x 60 cm (24 in) Clear Opening
- Pipe Penetration
- Fiber Optic ST-type Feed-through Kits for Antenna Tower and Turntable
- RF-shielded Penetration for Airline to Antenna Tower (Compressed Air is Responsibility of Customer)
- Corner-mounted Light Fixtures with Floodlights (Electrical Distribution not Included in All Markets)
- Shielding Effectiveness Test at 1 GHz with the Test Methods of MIL-STD-285/IEEE-299
- FerroSorb Hybrid Absorber
- Light Reflective Finish on the Walls and Ceiling
- FerroSorb Hybrid Floor Absorber on Sixteen (16) Movable Carts for Immunity Testing
- EHP Microwave Floor Absorber for an Area of the Floor for sVSWR Testing
- ETS-Lindgren Electrically Powered Turntable
- ETS-Lindgren Dual Device Controller
- ETS-Lindgren Boresight Antenna Tower; Electrically Powered and Air Polarization
- Warranty as per ETS-Lindgrens Standard Warranty for Anechoic Chambers and Associated Equipment

Charts

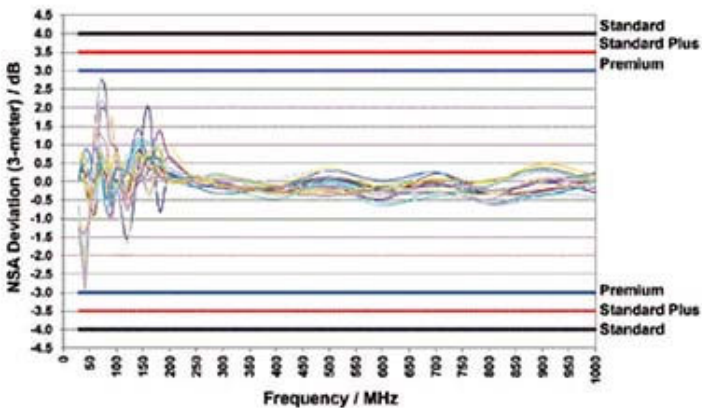
FACT™ 5 Chambers  
Measured Field  
Uniformity (Horizontal)



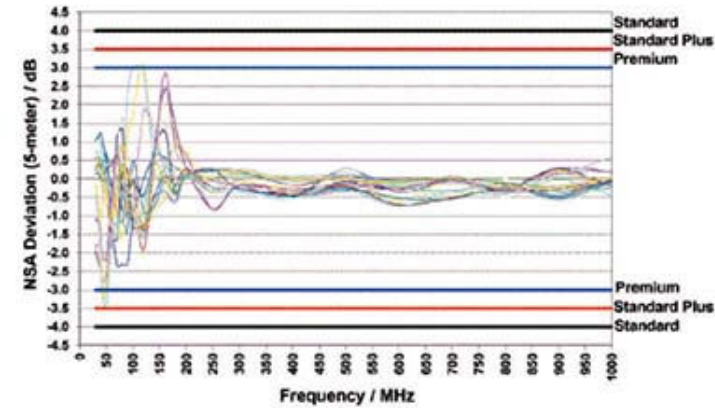
FACT™ 5 Chambers  
Measured Field  
Uniformity (Vertical)



FACT™ 5 Chambers  
Measured NSA  
Deviation (3 meter)  
30 MHz to 1 GHz



FACT™ 5 Chambers  
Measured NSA  
Deviation (5 meter)  
30 MHz to 1 GHz



FACT™ 5 Chambers  
Measured sVSWR  
Deviation (3 meter)  
1 GHz to 18 GHz

