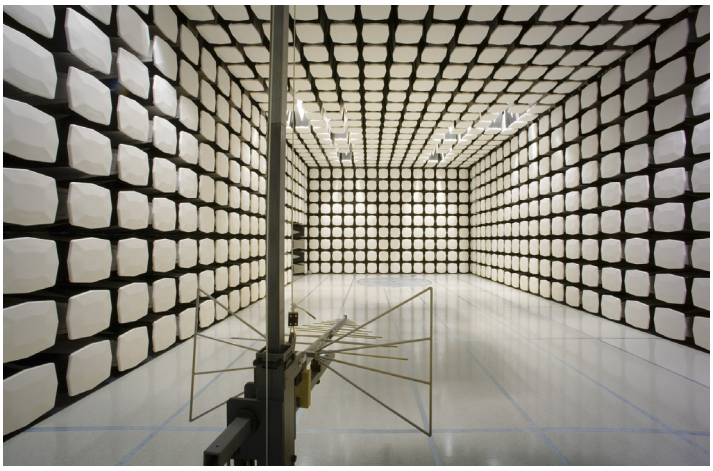
ETS·LINDGREN™
An ESCO Technologies Company

Test Chambers

Northwest EMC Test Laboratory

Northwest EMC's New Test Laboratory in Minnesota Now Available for Wireless, Medical and Consumer Electronic Product Testing

When Northwest EMC decided to open a new EMC test laboratory in the Midwest, they turned to a long time partner, ETS-Lindgren, to design and install a state-of-the-art ten meter chamber facility that would be the hallmark of the operation. The new facility also features a three meter and a pre-compliance chamber. Northwest EMC knew they could count on the chamber expertise ETS-Lindgren offers; after all, ETS-Lindgren also designed and installed the ten meter chamber at the company's Hillsboro, Oregon and Irvine, California facilities. This newest facility is located in Brooklyn Park, near the Twin Cities of Minneapolis/St. Paul, Minnesota.



Northwest EMC Test Laboratory, Brooklyn Park, Minnesota

The expansion enables Northwest EMC to better serve the wireless, consumer electronics and medical device markets. Using its proprietary software, which increases accuracy and decreases testing time, products are tested in accordance with the major industry standards. In addition, as with all Northwest EMC laboratories, this newest facility will be accredited by NVLAP to ISO 17025 standards, providing customers with global acceptance of their test reports.

"Our loyal Midwest clients have been commenting for years that they wish we were closer, so we finally decided to come to them. I am extremely excited for the opportunity to serve this market and have a face-to-face presence with our clients in the Midwest," said Dean Ghizzone, President of Northwest EMC. "I'm also happy to have partnered with ETS-Lindgren on our third ten meter chamber. I know I can count on the company to provide a state-of-the-art chamber, on time and on budget, so we're ready to go when the lights are turned on. ETS-Lindgren also shares our corporate philosophy of top-notch customer service so it's a pleasure to work with them," he added.

Technical Features - Specific Chambers

FACT™ 10 Ten Meter Semi-anechoic Chamber

- 61 ft long x 36 ft wide x 23 ft high, (18.6 m x 10.9 m x 7.0 m) nominal interior dimensions
- Recessed chamber design resulting in a raised floor being flush with the parent building floor
- Raised 18 in (457 mm) reflective ground plane with four 12 in x 12 in (305 mm x 305 mm) access hatches
- Three-meter heavy duty turntable with 8,800 lb (4,000 kg) distributed load rating

FACT™ 3 - 2.0 Standard Plus Three Meter Semi-anechoic chamber

- 28 ft long x 18 ft wide x 18 ft high (8.5 m x 5.5 m x 5.5 m) nominal interior dimensions
- Raised 10 in (254 mm) reflective ground plane with four 12 in x 12 in (305 mm x 305 mm) access hatches
- Three meter medium-duty turntable with a 3,300 lb (1,500 kg) distributed load rating

Compact Three Meter Pre-compliance Semi-anechoic Chamber

- 28 ft long x 18 ft wide x 13 ft high (8.5 m x 5.5 m X 3.9 m) nominal interior dimensions
- Dielectric floor underlayment, 1/8 in (3 mm) thick, with 6 mil polyethylene vapor barrier. Finished floor is 1/8 in (3 mm) vinyl floor tile
- Tripod positioner, Model 7-TR, provides increased stability for physically large, ultra broadband antennas and can bear up to a 30 lb (13.5 kg) load. The tripod's novel design using non-metallic, non-reflective construction materials that will not distort data ensures accurate measurements results. Quick height adjustment and locking wheels provide ease of use during testing

ETS·LINDGREN
An ESCO Technologies Company

Test Chambers

Northwest EMC Test Laboratory

Technical Features - All Chambers

- Constructed using the Series 81™ modular shielding panel system.
- Series 201™ Recessed Contact Mechanism (RCM) RF shielded doors;
  -- 1 each 8 ft x 8 ft (2.4 m x 2.4 m) dual-leaf door per chamber
  -- 1 each 4 ft x 7 ft (1.2 m x 2.1 m) single-leaf door per chamber
- Performance is compliant at:
  -- 30 MHz to 18 GHz for radiated emissions testing
  -- 26 MHz to 18 GHz for radiated immunity testing
- Complete fiber optic light source provided with feeds and lights; a cost effective solution that reduces lighting related heating within the enclosure
- Features RF waveguide air vents, connector panels, and RF power line filters designed and manufactured by ETS-Lindgren
- Seismic design is compliant with local building codes.

Absorber

Absorber includes ETS-Lindgren Models PAA-400, 600 and 1250, FAA -400, and FT-1500, a polyurethane and ferrite hybrid absorber with performance from 30 MHz to 18 GHz and above. Models PAA-600 and PS-600 are provided on the floor in convenient removable sections. Absorber is also provided on portable carts for use during specialized testing. ETS-Lindgren utilized its considerable absorber and chamber modeling capabilities, verified by countless actual measured data from previous chamber installations, to successfully predict the optimal absorber for this application.

Antennas and Probes

ETS-Lindgren provided a suite of its popular EMCO brand antennas to enable testing from 1 GHz to 40 GHz. A set of five E and H near field probes, Model 7405, in a convenient carrying case with coaxial extension and probe stand, a MiniMast II™ tower, and a controller provided complete the test accessories.

ETS-Lindgren Expertise

- The company's engineers actively contribute to and play a leadership role in key standards organizations, including IEEE 1309, ANSI ASC C63®, CTIA – The Wireless Association®, Wi-Fi Alliance™, WiMAX Forum®, and CISPR
- ETS-Lindgren's in house measurement and calibration facilities are accredited by A2LA, NVLAP (Lab Code 100286-0), CTIA (CATL), ISO 17025, APLAC, ILAC and EA
- ETS-Lindgren is an ISO 9001:2000 registered supplier.
- Over 20 product design engineers and Ph.D.s are on staff with a combined 200+ years of RF science and engineering expertise.

About ETS-Lindgren

ETS-Lindgren is an international manufacturer of components and systems that measure, shield, and control electromagnetic and acoustic energy. The company's products are used for electromagnetic compatibility (EMC), magnetic resonance imaging (MRI), microwave and wireless testing, electromagnetic field (EMF) measurement, radio frequency (RF) personal safety monitoring, and control of acoustic environments.

Headquartered in Cedar Park, Texas, ETS-Lindgren has manufacturing facilities in North America, Europe and Asia. The company is a wholly owned subsidiary of ESCO Technologies, a leading supplier of engineered products for growing industrial and commercial markets. ESCO is a New York Stock Exchange listed company (symbol ESE) with headquarters in St. Louis, Missouri. Additional information about ETS-Lindgren is available at www.ets-lindgren.com. Additional information about ESCO and its subsidiaries is available at www.escotechnologies.com.

Phone + 1.512.531.6400 ● info@ets-lindgren.com ● www.ets-lindgren.com
Offices in the US, Finland, UK, France, India, Singapore, Japan, China, Taiwan

4/09 - PDF R © 2009 ETS-Lindgren REV A