



Dedicated to innovation in aerospace

The NLR EMC test facility is one of NLR's environmental test facilities and covers the following Aerospace standards:

- DoD MIL-STD-461 (C to F) (*)
- RTCA DO-160 (C to G) (*)
- EUROCAE ED-14 (D to G) (*)
- AIRBUS ABD0100.1.2 (E and G)
- Boeing D6-16050-5 Rev. C (*) and D6-16050-4 Rev. D (*)
- DoD MIL-STD-704 (D)

(*) Performed under accreditation (Dutch Accreditation Council RVA, accreditation with registration number : L 220)

Other standards (e.g. FCC, IEC, DEF-STAN) and dedicated test procedures can also be supported.

Other capabilities of the NLR EMC facility are:

- Crosstalk measurements according to IEC 61935-1
- Surface transfer impedance – Triaxial method measurements according to CEI-IEC 62153-4-3
- Shielded screening attenuation measurements according to CEI-IEC 62153-4-4
- Surface transfer impedance – Line injection method measurements according to CEI-IEC 62153-4-6
- In-situ EMI test to customer specifications
- Helicopter platform annex Open Area Test Site (OATS) for emission measurements and antenna calibrations
- Variable frequency AC power source (9 kVA) for power quality tests

DoD MIL-STD-461F:

- CE101, conducted emissions, power leads, 30 Hz to 10 kHz (*)
- CE102, conducted emissions, power leads, 10 kHz to 10 MHz (*)
- CE106, conducted emissions, antenna terminal, 10 kHz to 40 GHz
- CS101, conducted susceptibility, power leads, 30 Hz to 150 kHz (*)
- CS106, conducted susceptibility, transients, power leads
- CS114, conducted susceptibility, bulk cable injection, 10 kHz to 200 MHz (*)
- CS115, conducted susceptibility, bulk cable injection, impulse excitation
- CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads, 10 kHz to 100 MHz
- RE101, radiated emissions, magnetic field, 30 Hz to 100 kHz (*)
- RE102, radiated emissions, electric field, 10 kHz to 18 GHz (*)
- RS101, radiated susceptibility, magnetic field, 30 Hz to 100 kHz (*)
- RS103, radiated susceptibility, electric field, 2 MHz to 40 GHz (*); HIRF 10 kHz to 18 GHz, 200 V/m

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RTCA DO-160G/EUROCAE ED-14G:

- Section 15, Magnetic Effect
- Section 16, Power Input
- Section 17, Voltage Spike
- Section 18, Audio Frequency Conducted Susceptibility (*)
- Section 19, Induced Signal Susceptibility (*)
- Section 20, Radio Frequency Susceptibility (Radiated and Conducted) (*)
- Section 21, Emission of Radio Frequency Energy (Radiated and Conducted) (*)
- Section 22, Lightning Induced Transient Susceptibility (*); Waveform 1 to 5, Level 1 to 5, Single Stroke , Multiple Stroke, Multiple Burst, PIN Injection, Cable Induction, Ground Injection

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AIRBUS ABD0100.1.2G:

- 3.2.2, Lightning Indirect Effects
- 3.3.2, Radio Frequency Conducted Susceptibility (10 kHz to 400 MHz)
- 3.3.3, Radio Frequency Radiated Susceptibility – Average Levels (100 MHz to 18 GHz)
- 3.3.5, RF Radio Frequency Susceptibility for Internal Transmitter environment
- 3.4.1, Magnetic Effect
- 3.4.3, Power Supply Audio Frequency Conducted Susceptibility
- 3.4.4, Induced Signal Susceptibility
- 3.4.5, Emission of Radio Frequency Energy (Radiated and Conducted)
- 3.5 Electrostatic Discharge (ESD) Susceptibility

Boeing D6-16050-4 Rev D:

- 7.2.1, AF Conducted Susceptibility – Power Inputs (*)
- 7.2.2, AF Electric Field Susceptibility – Wiring (*)
- 7.2.3, AF Magnetic Field Susceptibility – Wiring (*)
- 7.2.4, AF Magnetic Field Susceptibility – Equipment (*)
- 7.3.1, Conducted RF Susceptibility – 10 kHz to 400 MHz (*)
- 7.3.3, Radiated RF Susceptibility Test – 100 MHz to 18 GHz (*)
- 7.4.1, Ground-Injected Transient Susceptibility
- 7.4.2, Pin-Injected Transient Susceptibility
- 7.4.3, Interconnecting Cable Injected Transient Susceptibility
- 7.4.4, Lightning Induced Multiple-Burst Transient Susceptibility
- 7.5.2, Induced Spikes Susceptibility (*)
- 8.3.1, AF Capacitive Coupling (*)
- 8.3.2, AF Inductive Coupling (*)
- 8.4.1, RF Conducted Emissions (*)
- 8.4.2, RF Radiated Emissions (*)

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Boeing D6-16050-5 Rev C:

- 7.2.1, AF Electric Field Susceptibility – Wiring (*)
- 7.2.2, AF Magnetic Field Susceptibility – Wiring (*)
- 7.2.3, AF Magnetic Field Susceptibility – Equipment (*)
- 7.3.1, Conducted RF Susceptibility – 10 kHz to 400 MHz (*)
- 7.3.2, Radiated RF Susceptibility Test – 100 MHz to 18 GHz (*)
- 7.5.1, Induced Spikes Susceptibility (*)
- 8.1.1, AF Capacitive Coupling (*)
- 8.1.2, AF Inductive Coupling (*)
- 8.2.1, RF Conducted Emissions (*)
- 8.2.2, RF Radiated Emissions (*)

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DoD MIL-STD-704F:

- 5.2, AC power characteristics
- 5.3, DC power characteristics
- 5.4, Load characteristics