

# HERMES 10

## Full Compliance 10 m EMC Chamber

### STANDARDS

**Radiated EMI testing: Fully compliant with the following standards, from 30 MHz to 18 GHz:**

- CISPR 11,
- CISPR 16-1-4,
- CISPR 22,
- CISPR 32,
- EN 50147-2,
- EN 55011,
- EN 55022,
- ANSI C63.4,

**Radiated EMS testing: Fully compliant with:**

- IEC 61000-4-3 from 26 MHz to 18 GHz

**Radio standards:**

- All ETSI standards referring to CISPR 16 and IEC 61000-4-3



### BASIC CONFIGURATION

**Shielded room 18030 x 12160 x 8440 mm (external shield to shield dimensions)**

- Structural steel frame and stiffeners,
- 1 manual, single leaf, "knife edge" shielded door, with clear opening 1500 x 2130 mm, including maintenance kit,
- Raised floor, with metallic ground plane and 2 access hatches,
- 4 honeycomb air vents 300 x 600 mm, fitted with flanges,
- 2 feedthrough panels 1220 x 200 mm fitted with 2 N connectors and 2 feedthrough waveguides Ø 20 mm for fibre optics,
- 1 power line filter 2 lines (single phase + neutral) – 32 A – 230 V – 50 Hz,
- Electrical package: 1 main switchboard with appropriate protection, electric distribution and lighting,
- Absorbers lining
  - \* Ferrite tiles lining of the four side walls and ceiling,
  - \* Pyramidal matched hybrid absorbers HY45 (aqueous blue paint) lining of the most critical areas of the two side walls, back wall and ceiling (numerically simulated optimized design).

### OPTIONS

- Other doors dimensions & types (single, double, sliding)
- Electric or pneumatic assistance for door latching
- Shielded control room, shielded amplifier room
- Turntable (any diameter, any load)
- Automatic antenna mast (1 to 4 m height scan)
- GPIB interface controller (for positioners remote control)
- Additional power filters, data filters and special connectors
- Video monitoring CCTV system, Intercom/Audio monitoring system
- Vinyl tiles on the floor,
- Plastic paint for pyramidal matched hybrid absorbers
- Chamber testing:
  - \* Shielding effectiveness, according to EN 50147-1, from 10 kHz to 18 GHz
  - \* Site Attenuation, according to CISPR 16-1-4, from 30 MHz to 1 GHz
  - \* Site VSWR, according to CISPR 16-1-4, from 1 to 18 GHz
  - \* Field Uniformity, according to IEC 61000-4-3, from 26 MHz to 18 GHz



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## Full Compliance 10 m EMC Chamber

### EMI PERFORMANCES

SIEPEL HERMES 10 chamber is designed to perform **full compliance radiated EMI testing** according to the following standards: CISPR 11, CISPR 16, CISPR 22, CISPR 32, EN 50147-2, EN 55011, EN 55016, EN 55022, ANSI C63.4 from **30 MHz to 18 GHz**.

As a basic design, we propose a test volume with following main features:

- Diameter: 3 meters / Height: 2 meters
- NSA (30 MHz – 1 GHz) max deviation from theoretical value: better than  $\pm 4$  dB
- Site VSWR (1-18 GHz):  $\leq 6$  dB
- For bigger EUTs, we can propose larger test volumes.

*Please contact us: we can design the chamber that fits your particular needs!*



HERMES 10 EMI (Electromagnetic Interference)		
Frequency range	From 30 MHz to 1 GHz	From 1 GHz to 18 GHz
Applicable standards	EN 50147-2, ANSI C63.4, EN 55011, EN 55016, EN 55022, CISPR 16, CISPR 32 ...	CISPR 16
Height of Tx antenna	Horizontal: 1 m, 3 m Vertical: 1 m, 2,5 m	Horizontal : 1 m, 3 m Vertical : 1 m, 3 m
Height of Rx antenna	Scan from 1 to 4 m	1 m and 3 m
Measurement distance	<b>10 m</b>	<b>3 m</b>
Polarization	Horizontal and vertical	Horizontal and vertical
Measured position of Tx antenna	Tx antenna to be located in four positions (centre, front, left and right)	Tx antenna to be located in four positions (centre, front, left and right)
Working volume	Diameter : 3 m / Height : 3 m	Diameter: 3 m / Height: 3 m
Remarks	Test with metallic ground plane	44 APM 30 Absorbers on the floor
Max. deviation	$\pm 4$ dB	$\leq 6$ dB

### EMS PERFORMANCES

SIEPEL HERMES 10 is **fully compliant to perform radiated EMS testing** according to the EN/IEC 61000-4-3, in the extended frequency range from **26 MHz to 18 GHz**.

Immunity tests are performed with 16 electromagnetic pyramidal absorbers APM66 on the floor, between field generation antenna and uniform field plane.

Those absorbers can be very easily removed and stored outside the chamber when they are not necessary.

HERMES 10 EMS (Electromagnetic Susceptibility)	
Applicable standards	EN/IEC 61000-4-3
Frequency range	From 26 MHz to 18 GHz
Measurement distance	3 m
Field Generation Antenna	Biconical/ Log Per or broadband antenna
Rx antenna	Broadband isotropic probe, 16 positions, measured area of 1,5 x 1,5 m, located 0,8 m – 2,3 m over the floor
Polarization	Horizontal and vertical
Remark	Test with 16 APM66 absorbers on the floor
Field Uniformity	+0 to +6 dB for 75% of the 16 measured points