



## MAIN FEATURES

- Emissions and immunity testing in a single, shielded environment
- Meets basic standard: IEC/EN 61000-4-20
- Meets standards for emissions testing: CISPR 14-1, IEC 61000-6-3 and IEC 61000-6-4 for EUTs without connected cables
- Ideal for design qualification and pre-certification
- Fields generated are largely homogeneous and simple to calculate
- Efficient power conversion requires smaller power amplifier
- Excellent VSWR over the entire frequency range - no need for measurement of reflected power

## GTEM 500

### GTEM cell for emissions and immunity testing

A GTEM (Gigahertz Transverse Electro Magnetic) cell is a test site for efficiently performing both radiated immunity and emissions testing in a single, controllable and shielded environment. Compared to other test sites, GTEM testing is faster with high accuracy and excellent reproducibility.

In principle, the GTEM cell is a coaxial line expanding pyramidally and having an impedance of 50 Ω. At its end, the line is terminated by a combination of termination resistors and RF absorbers designed and constructed to match the above mentioned impedance.

The GTEM 500 has a maximum septum height of 500 mm and is suitable for emissions and immunity testing.

#### Standard configuration

- Under-carriage with locking casters
- Door, left or right side, clear opening of 44 cm x 38 cm
- Shielded window in door, 30 cm x 10 cm
- Door contact for free application
- EUT Box-1 with 2x 16 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable illumination
- Media interface (Media S) for 3x N-type connectors and optical feed through
- Measurement report for TDR, return loss and input power requirements for 10 V/m (30 - 3000 MHz)
- Shipped assembled, under-carriage needs to be mounted on the GTEM

#### Options

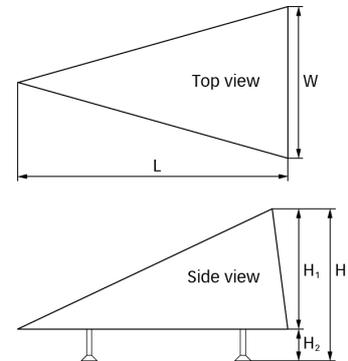
- Disassembled version (required Teseq supervisor, option ASS 500)
- Special filter solutions
- Endwise version
- SSA 500, stainless steel angles option for GTEM 500, recommended for countries with high humidity like Thailand, Malaysia, Philippines...
- SHD 2, additional door, clear opening of 44 cm x 38 cm
- XYZ manipulator MPH 500 or MPC 500 solution
- Test house software



GTEM 500-R with open door

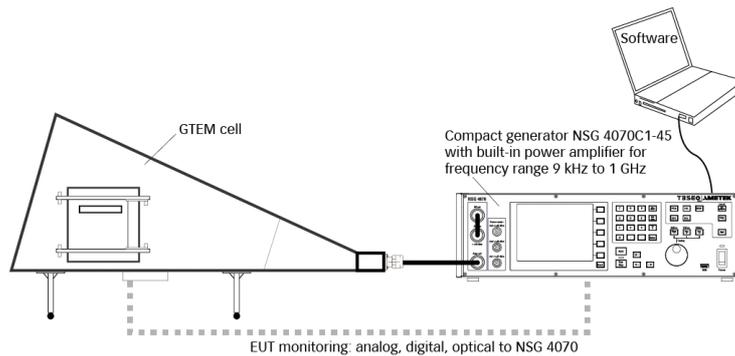
**Specifications**

	GTEM 500
Max. septum height	500 mm
Septum height at marker position	433 mm
EUT size (max. dimension, LxWxH in m)	0.41 x 0.41 x 0.31
EUT dimension for uniform-area 0 to 6 dB (LxWxH) in m	0.167 x 0.167 x 0.167
RF input connector	N-type
Nominal impedance	50 Ohm
Frequency range	DC up to 20 GHz
Frequency range according IEC/EN 61000-4-20	30 to 3000 MHz
Return loss / VSWR (DC to 18 GHz)	>15 dB / <1.45:1
Shielding effectiveness (30 MHz to 3 GHz)	>60 dB (typ. >80 dB)
Max input power	400 W
Required input power for 10 V/m (isotropic, 5 points, 30 to 3000 MHz)	2.4 W (0.7 W CW)
Field deviation (isotropic, 5 points, 30 to 3000 MHz)	<6 dB

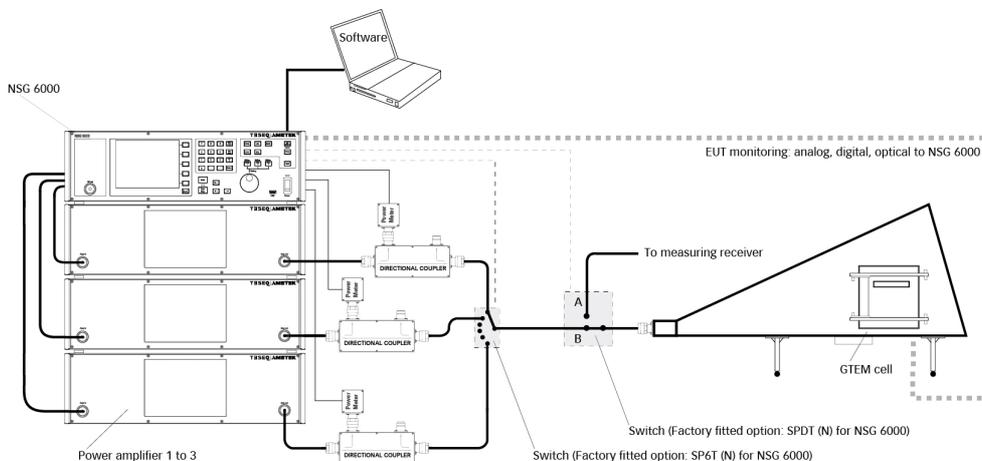


**General Specifications**

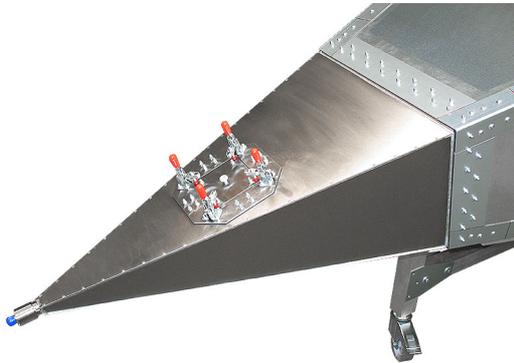
	GTEM 500
Dimension (LxWxH in m)	2.95 x 1.48 x 1.61
Weight	approx. 242 kg
Height H1 of cell corpus	1.04 m
Height H2 of supports	0.57 m
Door (LxH in m)	0.44 x 0.38



**Example of immunity test setup 9 kHz to 1 GHz with one power amplifier**



**Example of test setup 9 kHz to 6 GHz with three power amplifiers and measuring receiver**



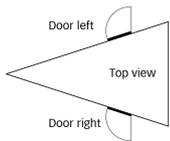
**Option: SAE opening for IC testing**



**Option: GTEM 500, vertical position, door left**

**Ordering information**

The door side and the country version of the single phase AC socket needs to be selected.



Schuko



UK version



US/JP version



CEE, 32 A version

**Model No. and options (selection shown for EU only)**

Description	Item No	Text
GTEM 500-L-EU	258807	GTEM with septum height 500 mm, under-carriage with locking casters, door on left side with clear opening of 44 cm x 38 cm and shielded window of 30 cm x 10 cm in door, door contact for free application, EUT Box-1 with 2x 16 A filter, 1 Schuko-socket inside, line safety switch, RCD, switchable illumination, media interface (Media S) for 3x N-type connectors and optical feed through, max. 400 W RF input power, shipped assembled, switchable fans, under-carriage needs to be mounted on the GTEM
GTEM 500-L-EU-MPH	258808	GTEM with septum height 500 mm, under-carriage with locking casters, door on left side with clear opening of 44 cm x 38 cm and shielded window of 30 cm x 10 cm in door, door contact for free application, EUT Box-1 with 2x 16 A filter, 1 Schuko-socket inside, line safety switch, RCD, switchable illumination, media interface (Media S) for 3x N-type connectors and optical feed through, max. 400 W RF input power, shipped assembled, switchable fans, under-carriage needs to be mounted on the GTEM, XYZ-manipulator handoperated included
GTEM 500-L-EU-MPC	258809	GTEM with septum height 500 mm, under-carriage with locking casters, door on left side with clear opening of 44 cm x 38 cm and shielded window of 30 cm x 10 cm in door, door contact for free application, EUT Box-1 with 2x 16 A filter, 1 Schuko-socket inside, line safety switch, RCD, switchable illumination, media interface (Media S) for 3x N-type connectors and optical feed through, max. 400 W RF input power, shipped assembled, switchable fans, under-carriage needs to be mounted on the GTEM, remote controlled XYZ-manipulator included
GTEM 500-R-EU	258800	GTEM with septum height 500 mm, under-carriage with locking casters, door on right side with clear opening of 44 cm x 38 cm and shielded window of 30 cm x 10 cm in door, door contact for free application, EUT Box-1 with 2x 16 A filter, 1 Schuko-socket inside, line safety switch, RCD, switchable illumination, media interface (Media S) for 3x N-type connectors and optical feed through, max. 400 W RF input power, shipped assembled, switchable fans, under-carriage needs to be mounted on the GTEM
GTEM 500-R-EU-MPH	258801	GTEM with septum height 500 mm, under-carriage with locking casters, door on right side with clear opening of 44 cm x 38 cm and shielded window of 30 cm x 10 cm in door, door contact for free application, EUT Box-1 with 2x 16 A filter, 1 Schuko-socket inside, line safety switch, RCD, switchable illumination, media interface (Media S) for 3x N-type connectors and optical feed through, max. 400 W RF input power, shipped assembled, switchable fans, under-carriage needs to be mounted on the GTEM, XYZ-manipulator handoperated included
GTEM 500-R-EU-MPC	258802	GTEM with septum height 500 mm, under-carriage with locking casters, door on right side with clear opening of 44 cm x 38 cm and shielded window of 30 cm x 10 cm in door, door contact for free application, EUT Box-1 with 2x 16 A filter, 1 Schuko-socket inside, line safety switch, RCD, switchable illumination, media interface (Media S) for 3x N-type connectors and optical feed through, max. 400 W RF input power, shipped assembled, switchable fans, under-carriage needs to be mounted on the GTEM, remote controlled XYZ-manipulator included