



## 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 1000

### 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  $\Omega$ . 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 1000 has a maximum septum height of 1000 mm and is suitable for emissions and immunity testing.

#### Standard configuration

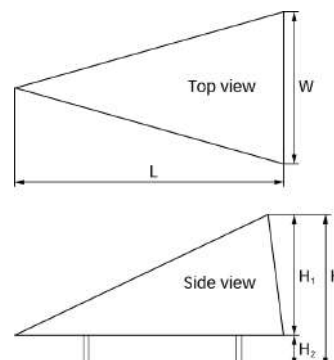
- Under-carriage with locking casters and additional supports
- Door, left or right side, clear opening of 48 cm x 68 cm
- Shielded window, 30 cm x 10 cm
- Door contact for free application
- EUT Box-1 with 2x 16 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable 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 disassembled, required Teseq supervisor, option ASS 1000

#### Options

- Special filter solutions
- SSA 1000, stainless steel angles option for GTEM 1000, recommended for countries with high humidity like Thailand, Malaysia, Philippines...
- Additional door
- SAE opening, clear opening of 93.4 mm x 93.4 mm
- XYZ manipulator MPH 1000 or MPC 1000 solution
- Test house software

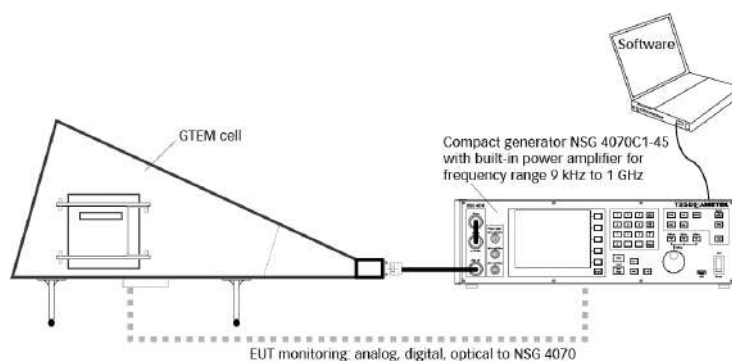
## Specifications

	GTEM 1000
Max. septum height	1000 mm
Septum height at marker position	866 mm
EUT size (max. dimension, LxWxH in m)	0.74 x 0.74 x 0.66
EUT dimension for uniform-area 0 to 6 dB (LxWxH) in m	0.33 x 0.33 x 0.33
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	1000 W
Required input power for 10 V/m (isotropic, 5 points, 30 to 3000 MHz)	9.7 W (3 W CW)
Field deviation (isotropic, 5 points, 30 to 3000 MHz)	<6 dB

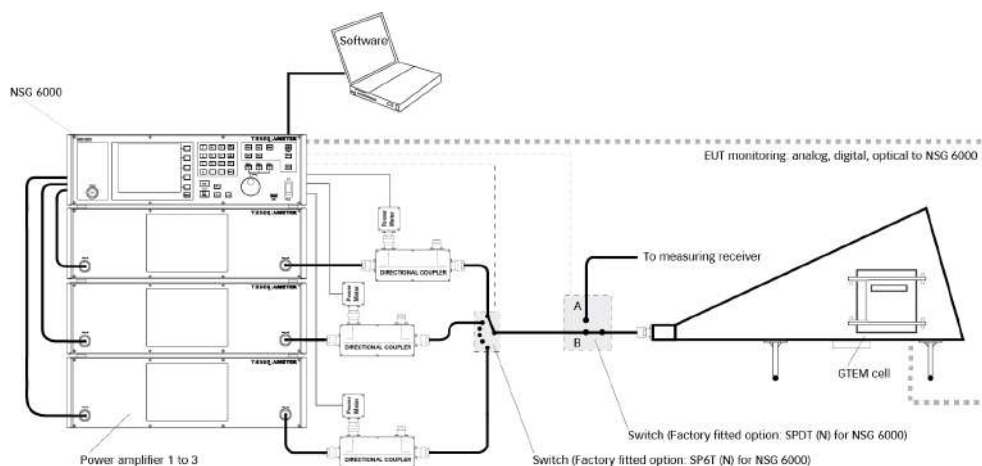


## General Specifications

	GTEM 1000
Dimension (LxWxH in m)	4.95 x 2.54 x 2.30
Weight	approx. 790 kg
Height H1 of cell corpus	1.73 m
Height H2 of supports	0.57 m
Door (LxH in m)	0.48 x 0.68



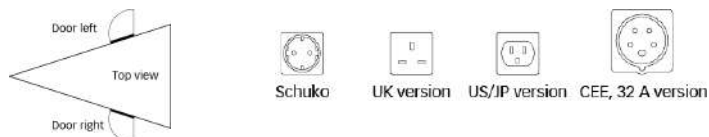
Example of immunity test setup 9 kHz to 1 GHz with one power amplifier



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

**Ordering information**

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


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

Description	Item No	Text
GTEM 1000-L-EU	258821	GTEM with septum height 1000 mm, under-carriage with locking casters, door on left side with clear opening of 48 cm x 68 cm and shielded window of 30 cm x 10 cm, 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. 1000 W RF input power, switchable fans, shipped disassembled, required Teseq supervisor option ASS 1000
GTEM 1000-L-EU-MPH	258822	GTEM with septum height 1000 mm, under-carriage with locking casters, door on left side with clear opening of 48 cm x 68 cm and shielded window of 30 cm x 10 cm, 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. 1000 W RF input power, switchable fans, shipped disassembled, required Teseq supervisor option ASS 1000, XYZ-manipulator handoperated included
GTEM 1000-L-EU-MPC	258823	GTEM with septum height 1000 mm, under-carriage with locking casters, door on left side with clear opening of 48 cm x 68 cm and shielded window of 30 cm x 10 cm, 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. 1000 W RF input power, switchable fans, shipped disassembled, required Teseq supervisor option ASS 1000, remote controlled XYZ-manipulator included
GTEM 1000-R-EU	258814	GTEM with septum height 1000 mm, under-carriage with locking casters, door on right side with clear opening of 48 cm x 68 cm and shielded window of 30 cm x 10 cm, 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. 1000 W RF input power, switchable fans, shipped disassembled, required Teseq supervisor option ASS 1000
GTEM 1000-R-EU-MPH	258815	GTEM with septum height 1000 mm, under-carriage with locking casters, door on right side with clear opening of 48 cm x 68 cm and shielded window of 30 cm x 10 cm, 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. 1000 W RF input power, switchable fans, shipped disassembled, required Teseq supervisor option ASS 1000, XYZ-manipulator handoperated included
GTEM 1000-R-EU-MPC	258816	GTEM with septum height 1000 mm, under-carriage with locking casters, door on right side with clear opening of 48 cm x 68 cm and shielded window of 30 cm x 10 cm, 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. 1000 W RF input power, switchable fans, shipped disassembled, required Teseq supervisor option ASS 1000, remote controlled XYZ-manipulator included