

## EMC Shielding Shelter tent

### Theory of operation, Introduction

GTEMCELL offer A Farady's principle based chamber for electromagnetic shielding. A tent made of special coupled metalized Cu-Ni tissue offer easy way to make a screened ambient whenever needs a shielding solutions with a light weight for transportation and fast installation GTEMCELL is there.

The tent structure is made in aluminium frame tube or in steel rods customized in dimensions and openings.

#### The open side (door)

It is made with a Velcro electrically conductive and with a ZIP metal with conductive fabric as support to ensure the conductivity of the two side of the part of the tent. An adequate size of overlapping of the conductive fabric ensures the good shielding .

The fabric is covered with a coating flame retardant also able to ensure a good abrasion resistance to the conductive surface. The flexibility is tested according AFNOR G52-020 .

Window: A ready-to-use metal mesh fabric panel offer a view from outside and inside or viceversa; size Aprx. 300 mm x 300 mm

#### Inside on the fabric surface

The electroless process offer a strong adhesion of the nickel 100% to the surface of polyester yarn all around .On the macro photo the deposition is uniform

·EMP protection line out input 420Vca/60KA

#### Quality test and shielding performance.

·Vibration test MIL STD 202-204 Shock Mil Std 202 205B -

· Salt spray Mil 202 101 B

·test in accordance MIL STD 285, IEEE standards, in the frequencies range starting from 30 MHz to 3 GHz

The average shielding performances is around 48 dB attenuation with peaks of 65 dB around 200 MHz and 400 MHz. Most of the results depends from the open side dimensions and the window if installed .



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### Key Features

- Engineered and completely manufactured in Italy.
- Ruggedized fully aluminium or steel construction
- Unique compact design.
- Optimized for EMI and EMC.
- Strong fields achieved with low input power
- Broadband up to 6GHz (up-gradable up to 20Ghz.)
- High effective shielding
- 4 poles 450Vac 50Hz 30A filter standard
- Excellent quality at Low cost

### Applications

- EMI and EMS devices
- Radiation and susceptibility test
- Specifically designed for telecom application

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- Biomedical and dosimetric applications
- Isotropic sensors calibration
- Receiver sensitivity test

**Specifications \***

Operating range:	DC-6GHz (DC-20GHz)
Shielding:	typical 45dB to 70dB depending from frequencies
Outer dimension:	3mt x 3mt x 2,5 mt (standard). On demand customized sizes.
Size for transportation:	N.1 bag for tent, N.1 bag for frame standard
Construction	Fully aluminium frame, special metalized tissue flame retardant.

**Technical panel \***

**Power supply / Filter box - In and out. \***

N.1 Feed-thru "SMA/BNC" connector	N.1 20 amp. 250VAC, mono phase + Ground line filter
N.2 Feed-thru "N" connectors	
N.1 feed-thru fibre optic penetration for 1 couples.	

**Options**

<b>W/</b> Inspection window with shielded polycarbonate glass 200mm. Diam
Feed-through panels, pipes connector
multi holes feed-thru fibre optic penetration for 3 or 6 couples.
filtered banana sockets 1A 1000Vac
<b>DB/</b> DB9 or DB25 filtered feed-through
Ethernet adaptor
<b>2F40</b> 250V Phase + Neutral + ground 40Amp.
<b>2F60</b> 250V Phase + Neutral + ground 60Amp.
<b>3F20</b> 400V Three Phase + Neutral + ground 20Amp.
<b>3F30</b> 400V Three Phase + Neutral + ground 30Amp.
<b>3F45</b> 400V Three Phase + Neutral + ground 45Amp.
<b>3F70</b> 400V Three Phase + Neutral + ground 70Amp.
honeycomb in steel 3/16 thickness: 1"
Exhaust fan Kit
<b>HP/</b> RF Input 1600W with Hi-power terminations, for continuous duty
<b>FAN/</b> Fans Kit for external heath-sink
<b>L/</b> 50W halogen quartz lamp
<i>Customized solutions available upon request</i>

\* data subject to variations without notice

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Windows, and door.

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