



# S800 HOSPITAL SPECIFICATION

## MODULAR SHIELDED ENCLOSURE FOR HOSPITALS

### 1. GENERAL

- a) The R.F. shielded solid wall enclosure described and herein specified shall be designed and installed for the containment or exclusion of radio frequency interference.
- b) The R.F. shielded enclosure is to be supplied by a competent R.F. shielded enclosure manufacturing company with a proven history in the manufacture, supply and support of these structures. The manufacturer/supplier should have NATA accreditation to undertake Attenuation Performance Testing of the R.F. Shielded Enclosure in accordance with Mil-Std-285 and Mil-Std-188-125. Supporting evidence of the tenderer's capabilities and experience is to be submitted with the tender.

### 2. PERFORMANCE

The installed enclosure shall be capable of providing minimum attenuation as follows:-

90 dB at 100 MHz  
60 dB at 1 GHz

### 3. SIZE

*The enclosure shall be \_\_\_\_\_ (w) x \_\_\_\_\_ (l) x \_\_\_\_\_ (h)*

Select dimensions form the following Table of Standard Modular Sizes( Note: other sizes are possible):

WIDTH	LENGTH	HEIGHT
2.44m	1.24m	2.44m  (standard)  or  3.04m
2.44m	1.84m	
2.44m	2.44m	
2.44m	3.64m	
3.04m	3.04m	
3.64m	3.64m	
3.64m	4.84m	
3.64m	6.04m	
3.64m	7.34m	
4.84m	4.84m	
4.84m	6.04m	
4.84m	7.34m	
6.04m	6.04m	
6.04m	7.34m	
7.34m	7.34m	
7.34m	8.54m	
8.54m	8.54m	

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## 4. MATERIALS

All materials used in the enclosure, including all accessories, shall be new, undamaged and installed and used in such a manner that normal wear and tear does not affect the specified shielding effectiveness.

## 5. CONSTRUCTION

### a) General

The shielded enclosure shall be of a prefabricated modular type and shall be fully capable of being assembled and disassembled wholly from the inside.

### b) Panels

The panels shall be constructed of a layer of electrolytically deposited zinc coated steel sheets of -.6mm laminated to both sides of 12mm medium density fibre board (or similar).

The walls, floor and ceiling panels shall be of the same construction. Each panel shall be nominally 2.4m by 1.2m in size.

The panels shall be joined and supported by specially designed members that clamp the edges of the panels and provide continuous, uniform and constant pressure contact against the shielding elements of the panels. The walls shall be self-supporting from floor to ceiling with no bracing against the parent room construction. The ceiling shall be self-supporting.

### c) Framing System

The steel frame system shall consist of four types of section, "M", "U", "hat" and "flat" with "M" and "U" sections forming the corner and the "hat" and "flat" sections the intermediate joints. These sections shall be made of 3mm zinc plated steel. The "M" and "hat" sections shall have "nutserts" fixed at suitable centres. The "U" and "flat" sections shall have holes punched to correspond to the positioning of the "nutserts."

In addition, the "flat" sections shall be of a convex contour so there will be a positive spring tension to ensure an RF tight enclosure. Screw fasteners of zinc plated steel not less than 6mm in diameter shall be provided to complete the assembly.

The entire framework shall be supplied with integral interconnecting tabs to enable erection and dismantling to be carried out with minimal loss of time.

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## d) Doors

The shielded doors shall have a minimum clear opening of 830 x 2020 unless otherwise specified.

The enclosure shall have one door. Door design is to incorporate protected contact strips ("knife edge doors"). The contact strips shall be replaceable without the need for solder or fasteners.

The door operating mechanism shall incorporate a rack and pinion and two-point (minimum) cam/roller latching system capable of a minimum of 100,000 operations with minimal maintenance.

## e) Floor

The original building floor must have a level surface of 3mm within 3 metres.

The shielded enclosure shall be supported with suitable hardboard sub-flooring to provide levelling when necessary and to provide for electrical isolation from the parent room floor.

The shielded enclosure floor shall be capable of supporting loads of 5000kg/m<sup>2</sup>. The complete enclosure shall be provided with, (unless otherwise specified), heavy-duty vinyl tiles.

## 6. WAVEGUIDE AIR VENTS

The enclosure shall be fitted with a waveguide vent of size 300 x 300 in the ceiling complete with a 50mm spigot to allow for connection to the air supply duct (if required).

## 7. GROUNDING

The enclosure shall be fitted with an earth stud of solid brass of not less than 6mm diameter. The earth stud shall extend a suitable distance both inside and outside the enclosure for installation of ground leads. The earth stud shall be provided with its own washers and nuts.

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## 8. FILTERS

RF Power, Signal and Control Filters are to be supplied for the following circuits:

Circuit Description	Number of Conductors	Voltage (AC & Hz) (DC)	Current	Data Rate (if applicable)	Comments
<b>Complete as necessary</b>	<b>Complete as necessary</b>	<b>Complete as necessary</b>	<b>Complete as necessary</b>	<b>Complete as necessary</b>	<b>Complete as necessary</b>

## 9. PENETRATION PANELS

Penetration Panels and/or penetrations are to be provided as necessary for the following services:

Service	Details
Sprinkler	<b>Complete as necessary</b>
Fibre Optic	<b>Complete as necessary</b>
Penetration Panel	<b>Complete as necessary</b>
Co-axial (BNC, N, TNC etc.)	<b>Complete as necessary</b>
Other	<b>Complete as necessary</b>

## 10. TESTING

The completed installation shall be tested by the installer to prove that the performance of the enclosure meets the minimum requirements as laid down in paragraph 2. This test shall be carried out in accordance with MIL-STD-188-125 procedures and the installer is to provide all the necessary test equipment to carry out these tests.

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