

NTD SHIELDING SERVICES LTD

"QUALITY WITHOUT COMPROMISE"



PROVIDING CONTROLLED SHIELDING ENVIRONMENTS PROTECTED FROM ELECTROMAGNETIC INTERFERENCE



PRODUCTS

SERVICES

COMPONENTS

ABOUT US

NTD Shielding Services is an independent UK based specialist RF/EMC shielding solutions provider with over 25 years' experience and expertise in the EMC and electronic test and measurement markets in the UK, EMEA and the USA.

We specialize in the design, manufacture and installation of compact EMC chambers, RF shielded rooms, Tempest/Forensic rooms, Antenna chambers, EMI chambers, Mob chambers and RF bench top box's complimented by a world leading range of EMC/RF test and measurement equipment and many other EMC/RF related products. We also provide bespoke maintenance and service packages including shielding effectiveness and validation testing ensuring continued high performance and increased longevity

Based in the Northwest of England NTD designs, manufactures, project manages and installs the world's highest quality and most advanced RF test chambers and integrated testing solutions with practicality, user friendliness, high performance and cost effectiveness in mind.

The NTD aim is to meet and exceed every individual customer's requirement across all parameters keeping every NTD customers one step ahead of their competition.

The NTD mantra is "quality without compromise" and we believe by concentrating on this core belief coupled with our unparalleled knowledge of the EMC and RF markets we are able to offer our customers the best quality and most future proofed solutions the market has to offer.

CONTENTS

Chambers/ Shielding solutions

RF Shielded Rooms
Tempest/Forensic Rooms
EMC Chambers
Antenna Chambers
Mobile Chambers
Shielded Boxes
HEMP Data Cabinets
Reconditioned Chambers and Shielded Boxes

Chamber Components

Ferrite Tiles & Absorber
Penetration Panels
Fiber Optic Pipes
Waveguide vents
RF Power Filters
Finger stock Sealing Strips and TCS gaskets
Test benches an Tables

Chamber Integration

Electrical Supplies and systems
Air Conditioning/HAVC
VESDA Systems
LAN/HDMI and other Media Converter Packs

Chamber Services

Installations, Modifications & Upgrades
Relocations
Maintenance/Services
Testing and validation

RF SHIELDED ROOMS

NTD RF shielded rooms are constructed using either the NTD-S100 or NTD-P100 high performance using a modular shielded panel system which are fitted to provide a complete RF shielded enclosure.

The NTD-S100 construction consists of specialized double skin, 18mm thick, RF panels which are clamped together with specialised hat and flat and corner cove sections which create the RF seal.

The NTD-P100 pan type RF chamber system consists of modular, hot galvanized, rigid steel structural panels which are bolted together to sandwich a specialist gasket which provides the RF seal.



See NTD-CR08 & NTD-CR09 for more on NTD-S100 and NTD-P100 respectively.

TEMPEST/FORENSIC ROOMS

Our forensic shielded rooms prevent any electronic signals from external sources from connecting to devices inside the room.

This product is capable of isolating 5G/4G, Bluetooth, Wi-Fi & GSM with over 100dB of shielding. A high quality of internal linings are installed to provide customers with a bright, comfortable and practical environment while retaining a high level of RF performance.



See NTD-CR06 for more on Tempest Shielding Facilities.

EMC CHAMBER RANGE

Every NTD EMC pre Compliant test chamber is a bespoke customised design with the aim to meet and exceed each individual customer's specific requirements ensuring they capture all current and future testing needs and requirements.

NTD has over 25+ years specialist industry knowledge and this experience coupled with our in-house 3D SolidWorks design modelling packages and High-performance RF shielding systems NTD S100 or X100 results in NTD being able to design every Test Chamber to exacting customer's bespoke customised requirements.

The range includes:

- NTD CISPR 25: Semi Anechoic Chamber (SAC)
- NTD 3FCC: 3m Compact EMC Test Chamber (FAC)
- NTD 3SCC: 3m Compact EMC Test Chamber (SAC)
- NTD MCF: 3m Micro EMC Test Chamber (FAC)
- NTD MCS: 3M Micro EMC Test Chamber (SAC)



See NTD-CR02 for more on Compact EMC Chambers and NTD-CR10 to NTD-CR14 for more on our full chamber range.

ANTENNA CHAMBERS

The NTD A100 Antenna chamber range is the ideal solution for mm wave, 5G, beam forming, low directivity antennas, radar and R and D testing.

The NTD A100 Antenna chamber range is a high-performance range of customised Antenna chambers individually designed to meet every customer's exact requirement and the ideal solution for testing mm wave, 5G, beam forming, low directivity antennas, radar, R and D testing and many other applications.



See NTD-CR01 for more on Antenna Chambers.

MOB CHAMBERS

NTD designs and manufactures X100 high performance mobile, bespoke and customised mobile RF and Antenna chambers which have been developed to meet all types of customers' requirements. The NTD mobile RF and Antenna chambers are very high performance and offer +100db of shielding attenuation @ 40GHz and can be fitted with best-in-class absorbers rated up to 110 GHz.



See NTD-CR03 for more on Mobile EMC Chambers.

RF DOOR RANGE

NTD have a range of RF shielded doors which are designed and manufactured to provide easy and efficient access into any RF shielded facility while adhering to the performance of the main shield.

The NTD RF door range consists of:

- Single Door
- Double Door
- Pneumatic Door
- Sliding door
- Gas spring loaded door



See NTD-DS?? for more on RF Doors.

SHIELDED BOXES

The NTD X100 range of RF boxes have been specifically designed for customers who require a high level of shielding attenuation and reproducible and repeatable test results.

The X100 range has unprecedented shielding performance with Shielding-attenuation of +100dB. @ 40GHz which eliminates outside signal interference thus isolating the device under test.



See NTD-CR07 for more on RF Shielded Benchtop Boxes.

HEMP DATA CABINETS

NTD possess extensive knowledge and expertise in the construction of Modular RF Shielded Cabinets and Shielded Containers which meet all Electromagnetic Pulse Protection (EMPP) shielding requirements.

- 100dB minimum shielding effectiveness @ 18GHz
- Configured to any size from desktop to walk-in
- Power and data filtering options
- Ventilation and cooling options
- Additional racking
- Shock mounts/lockable castor wheels

See NTD-CR04 for more on HEMP Data Cabinets.

RECONDITIONED CHAMBERS

NTD offer a wide range of quality reconditioned items for the RF test and measurement markets as listed below:

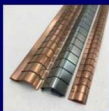
- RF Rooms: All types and sizes
- RF Doors: Single, double, Pneumatic
- RF Filters: Power (single/3 phase) and Control
- Turntables: Low profile up to 2m heavy duty
- MAPS systems: Various makes and manufacturers
- Ferrite tiles: Singular, 600mmx 600mm boards, movable floor carts
- Absorbers: Various standard and rubberized options
- Test equipment: Amps, power sources and spectrum analyzers
- GTEMS: Various types and sizes
- Bench top RF boxes: Various types and sizes
- Specialist pipes: Various types and sizes
- Waveguide vents: Various types and sizes



FERRITE TILES & ABSORBER



When you are looking for extended performance above 1GHz or simply to dampen some inside reflections NTD can help with a large and varied range of absorber material including rubber coated options.



FINGERSTOCK SEALING STRIPS

NTD Shielding Services supply a vast array of different fingerstock sealing strips in a multitude of profiles and sizes.

CHAMBER COMPONENTS



PENETRATION PANEL

Our standard penetration panels provide shielding effectiveness equal to the performance of the main shield.

Specification & Standard sizes:

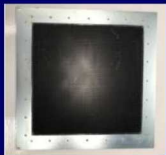
- 300mm x 300mm (clear opening)
- 300mm x 600mm (clear opening)



FIBRE OPTIC PIPES

Waveguide Filter with removable plug for transmission of pre-terminated fibre optic cables into the test environment without compromising shield performance.

The FOP1, FOP2 & FOP3 can accommodate 8, 12 & 16 single fibre optic cables, respectively.



ATTENUVENTS

Attenuvents allow air movement and equalisation of internal and external air pressure whilst maintaining the integrity of the shield.

Supplied as standard in sizes of 300mm x 300mm but larger sizes are available upon request.

Can be used to facilitate air conditioning without compromising the shield performance.



Power & Control Line Filters

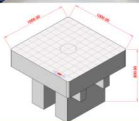
NTD Shielding Services supply high performance filters that are ideal for this application and are designed to meet the very highest insertion loss requirement of 100dB from 10kHz to 10GHz and features an extended low frequency performance to provide considerable filter attenuation at frequencies as low as 1kHz.

TEST BENCHES

NTD provide a range of test benches & tables for EMC emissions testing.

The NTD CISPR 25 (top right) Copper Test Table is a high quality hand made wooden bench with a conductive copper bench top and can be easily grounded to a chamber wall or conductive floor. NTD also offer a copper test bench which has various sizes and configurations available

Furthermore, NTD offer a lightweight and portable solution to a low dielectric table for radiated emissions measurements (bottom right). The table is made from a high performance polystyrene which has virtually no influence on radiated emissions especially over 1GHz, with a dielectric constant of >3.0 .



See NTD-DS11 to NTD-DS13 for more on test benches and tables.



ELECTRICAL SUPPLIES

NTD Shielding systems are supplied with bespoke electrical installations which fulfil the individual need of the client. We understand that every requirement is different and so we work with our clients in order to ensure that the finished chamber specification will comfortably accommodate the number and types of equipment that will be required in order to carry out the intended activities within a professional and well-appointed environment.

See NTD-DS14 for more on electrical packages.

AIR CONDITIONING

All air conditioning systems supplied are of the highest quality and incorporate the latest and most energy efficient technology. Each system is designed to meet the requirements of the environment within the chamber and is sized accordingly.

Our Air Conditioning Systems are installed by fully certified and competent engineers.

All systems are fully tested and service packages are available upon request.



See NTD-DS19 for more on air conditioning.

VESDA SYSTEMS



VESDA is the abbreviation of Very Early Smoke Detection Apparatus and for good reason! This aspirating smoke detector can detect minute amounts of smoke and provide a very early warning should something be afoot. VESDA Systems work by continually drawing air from the protected environment into the sampling holes within the pipe network where it is filtered before passing into the detection chamber. The system allows that no electronic components are required to be within the chamber itself and so the system has no adverse effects on the internal environment.

See NTD-DS20 for more on VESDA systems.

MEDIA CONVERSION PACKS

NTD Provide a range of media converter which allow digital information to be transferred in and out of an RF shielded enclosure without compromising the integrity of the shield.

CONTENTS:

- NTD fibre pipe (8 way 4 pair)
- 1m fibre optic cable
- 2 x media converter blocks
- 2 x power supplies

TYPES AVAILABLE

- HDMI
- RJ45
- USB 3.0



See NTD-DS?? For more on media converter packs.

INSTALLATIONS, MODIFICATIONS & UPGRADES



NTD is the UK's and Europe's No1 RF chamber and EMC facility modification and upgrade specialist.

NTD are able to offer and implement all types of both practical and performance enhancing upgrades to any type of existing RF/EMC chamber in line with any type of customer requirement.

RELOCATIONS

NTD has the capability, expertise, experience, and track record to efficiently dismantle, transport, and rebuild any type/size of RF/EM/ANTENNA chamber/facility regardless of manufacturer. NTD can also adapt, reconfiguring and upgrading the facility to suit the new host building and or customers new requirements if desired.

Shielding effectiveness Pre-test, dismantle, packing, transportation, rebuild, Full SE test, re wire, re calibration, VESDA systems, HVAC/Air conditioning NTD handles it all. One company one complete solution.

MAINTENANCE & SERVICE

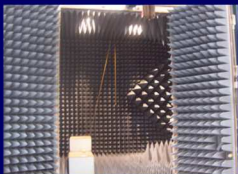
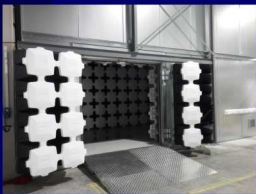
NTD maintenance & service contracts are completely bespoke, tailored to suit each individual customer's specific requirement and are also proven to be a very cost-effective long-term solution when the customers emphases are on minimising downtime and ensuring accuracy and reliability of test results.

- RF Doors and hatches
- RF Shielded Enclosure & Absorber:
- Positioners/Masts:
- Turntables
- Air-conditioning systems
- Electrical systems
- HVAC systems
- Shielding effectiveness testing from 15kHz up to 60GHz

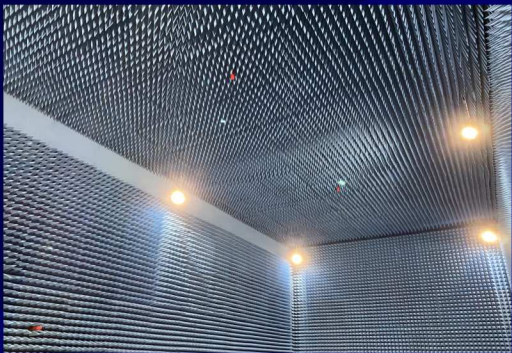
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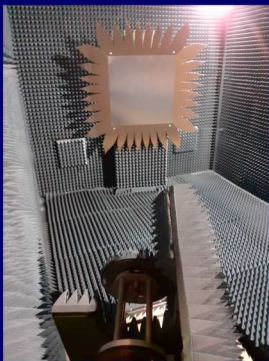






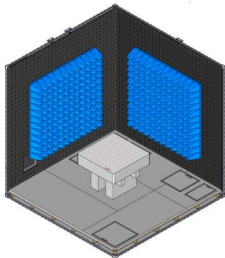


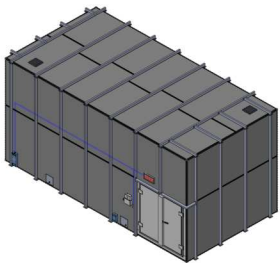




CONCEPT TO REALITY


Enquire today for a custom-made designed product to suit your requirements, with an accurate representation of the final product delivery.








GET IN TOUCH


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