Introduction

Amray is a leading European manufacturer of Radiation Shielding products to the medical and pharmaceutical sectors. Our extensive range of room shielding, personal protection products and accessories are unrivalled.

Established since 1985 and with our own design and R&D teams, Amray have an enviable reputation for product design and innovation in the field of radiation protection. The company continues to provide the medical and pharmaceutical sectors with the very best in radiation shielding and personal protection products.

Radiation Shielding is to confine and control emissions from a known radiation source. These emissions can be calculated and shielding provided to act as an effective barrier against the harmful effects of radiation.

The AmRay homogenous room shielding design will incorporate wall, floor, ceiling, entrance doors and window systems for complete protection.

Amray radiation shielding systems offer complete protection for staff, patient and members of the public in the containment and control of radiation emissions. Our products meet the highest quality standards, conform to the rigorous requirements of European legislation and are manufactured at our ISO quality assured factory based in Ireland.

Amray offer a supply only or supply and install service as required. We also provide a turnkey solution that also includes design of room layout and lead thickness requirements.
Radiation Protection
Doors & Door Sets

AmRay offer a wide selection of radiation protection lead lined doors and frames. They are available in a variety of styles, form and function. Designed and manufactured to industry standards and conforming to European legislation, AmRay radiation protection doors offer complete protection against radioactive emissions.

Swing Doors

AmRay’s radiation protection Swing Doors offer complete protection with a lead lining located at the core of the door. A lead thickness of up to 20mm can be accommodated making this door design suited to a wide range of applications including high energy installations such as nuclear medicine, PET etc. To support the load of the door, heavy duty hinges are incorporated into the design of the doorframe. All doors are custom made in our factory and designed to match our clients requirements for protection, purpose, colour, finish and size.

Lead Lined Swing Doors

- Standard door sizes: height of 210cm and an opening width of 60 - 70 - 80 - 90 - 100cm
- 0.5 – 20.0mm Pb lead lining available
- All ironmongery supplied as standard
- Doorframes available in wood, steel or aluminium sections
- Finish options: veneer, plastic laminate or primed for paint
- Design service available to accommodate:
  - Changes to door sizes
  - Protection levels
  - Glass Vision Panels
  - Frame designs
  - Surface finish
  - Ironmongery
- System provides a homogeneous lead lined barrier

Telescopic Steel frame

- Telescopic frame suits a range of wall thicknesses
- Adjustable -5mm/+20mm
- High grade steel for strength and durability
- Pre-finished on site
- Rapid Installation
- Suited to new and retro-fit installation

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Sliding Doors
Up to 4mm Lead Thickness

Sliding Doors are a common solution where swing doors are impractical and where larger openings exist. AmRay’s sliding doors are built to withstand the rigours of everyday use and combined with an easy glide monorail system for ease of use. Also available with a motorised sliding mechanism operated by motion sensor or push button for ease of access.

All sliding doors are designed and manufactured to client specification.

Sliding Doors
4mm+ lead thickness

High energy environments such as nuclear medicine, PET, Linen Accelerator etc. require a greater density of lead in the core of the door to provide adequate protection. The design of the door construction and sliding system are optimised for complete protection and ease of operation. The door construction allows a lead core of greater than 4mm to be accommodated to provide adequate protection in high energy environments.

Lead Lined Sliding Doors

✔ Easy glide monorail system for ease of use
✔ Motorised Sliding door option incorporating
  • Aluminium monorail for ultra smooth slide
  • Motion sensors
  • External radiation leakage sensors
  • Manual door override release system
✔ Fire rated

✔ Design service available to accommodate:
  • Door sizes
  • Protection levels
  • Vision panel requirements
  • Frame designs
  • Surface finish

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AmRay Wall Shielding

Radiation shielding is achieved by bonding lead to fibreboard or plywood to meet the design needs of an individual project. Lead thickness is variable depending on the levels of protection required.

Amray offer four specialist designs of Room Shielding systems for walls, ceiling and floors:

Wall Systems
Lead Requirement up to 4mm

Lead Lined Fibreboard System
The fibreboard system is supplied with a finished surface.

Lead Lined Plywood System
The plywood system is designed to receive any surface finish.

Wall Shielding Systems up to 4mm Lead Thickness

- ✔ Continuous protective barrier
- ✔ Modular system for ease & speed of installation
- ✔ Bonded lead system for added strength
- ✔ Impact resistant
- ✔ Moisture resistant
- ✔ Fire resistant
- ✔ High load bearing
- ✔ Double sided option for self supporting structure where both sides are visible
- ✔ Suited to dry lining
- ✔ Sound insulation
- ✔ Design & Installation service available
Wall Systems
Lead Requirement exceeding 4mm

Heavy Lead Panel System

Amray lead panels provide a strong and durable solution. The lead panel design is modular in construction resulting in an easy and fast installation on site. The ideal solution for heavy lead lining greater than 4mm. The panel is fitted unfinished allowing any surface finish required to be applied.

Lead Brick System

The Lead Brick system is suited to situations where a lead lined panelling system is not practical or not available in specific sizes or protection levels required. Lead Bricks are found in installations where exceptional levels of protection are demanded – typically greater than 10mm.

Available in 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22.5, 24 & 25mm thickness. Where installations require greater levels of protection this can be achieved through the layering of bricks with staggered joints.

Wall Shielding Systems
> 4mm Lead Thickness

- Modular system for ease & speed of installation
- Suitable for lead requirement of 4mm - 30mm
- Optional laminate finish
  - Hygienic & sterile surface
  - Choice of colours
  - No further finishing required
- Suitable for Wall, Ceiling and Floor applications
- Supplied unfinished, veneered or with a wipe clean laminate surface

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Ceiling Shielding

Lead Panels are used to protect the ceiling and provide it with a continuous lead layer. This lead layer will protect the upper levels of the building and prevent the penetration of radiation emissions. AmRay ceiling shielding can be used in various environments e.g. X-ray protection / Nuclear Shielding PET. However these environments require different codes of practice and lead thickness to provide the correct level of protection. Amray will assist with the calculation and design of lead thickness requirements.

Lead Lined Plywood systems are recommended for ceiling installations due to their structural qualities in supporting the weight of the lead. The thickness of plywood is varied to meet the structural requirements necessary to support the lead thickness.

Floor Shielding

Floors can also be shielded mainly where it is not possible to protect the ceiling below. The same lead lined plywood panel system is incorporated into the floor shielding design.

Neutron Shielding

AmRay design and install neutron / linear accelerator shielding solutions.

Working with the worlds leading machine suppliers and in consultation with project architects and engineers our physicist will design the shileding requirements to absorb or attenuate radiation to the maximum permissible level.

The shielding design incorporates gamma / neutron shielding materials appropriate to the individual needs of a project.

Common solutions include concrete and high-density concrete for walls, ceilings and floor slabs. Lead shielding and neutron shielding materials contained within steel facings are also available.
X-Ray Protection Control Booth

X-ray protection control booths provide the user with a safe viewing environment during x-ray procedures. The cabins are constructed from panels with a lead core that are faced on both sides. Lead glass viewing panels are incorporated into a design with the complete structure being housed within an aluminium frame. Once assembled the whole system becomes a self-supporting unit.

Leaded Glass / Radiation Protection Glass

A leaded glass-viewing window is an important feature in any scanning room. This allows the operator to view the patient in a protective environment. The lead material inside the glass can vary depending on the lead equivalence required. Lead glass can be provided to any size depending on the client’s requirements.

Amray leaded glass can be integrated into all room shielding systems, X-Ray & CT Scanning rooms, medical diagnostic rooms, laboratories, radiation protection doors, nuclear doors, medical performance doors and into bespoke installations.
RF Shielding
(Radio Frequency)

Designed in Aluminium for MRI systems, RF Shielding controls and contains the magnetic field thereby protecting the quality of the image. Unlike copper alternatives the Aluminium design is a self supporting durable design constructed from modular aluminium sections.

The aluminium design provides a stable magnetic field allowing the MRI system to project high resolution images of the patient within the chamber.

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MRI Glass Door

Through the new MRI glass door, doctors and medical staff have a constant view of the patient. At the same time, the room containing the magnetic resonance tomograph is well shielded. The new glass door can be used for all magnetic resonance tomographs (R.F attenuation > 100 dB). The door also has excellent sound absorption properties (sound reduction index > 44 dBA).

The MRI special door incorporates both functionality and an attractive modern design. Using this glass door allows the creation of bright and friendly rooms. Personal logos can be integrated as required. The MRI door is harmoniously incorporated into the existing surroundings.
X-Ray Protective Mobile Screen

Mobile screens are used during various procedures to provide protection to medical personnel. Additionally, AmRay's mobile screens offer a choice of glass viewing area to maintain good visibility of the operating field. Our in-house design team are able to adjust specification to meet any non-standard requirements.

**AMS - 076999**
- Multi Purpose Mobile screen
- Completely seamless hygienic, easily cleanable PVC finish
- Easy move castors with brake
- 2mm lead core supplied as standard (alternative thickness available)
- Unique flush vision panel design with 2mm Pb lead equivalence
- Standard size 83cm x 190cm (WxH)
- Standard glass size 30cm x 40cm (WxH)
- Other sizes available on request

**AMS - 076986**
- Multi Purpose Mobile panoramic screen
- Completely seamless hygienic, easily cleanable PVC finish
- Easy move castors with brake
- 2mm lead core supplied as standard (alternative thickness available)
- Unique flush vision panel design with 2mm Pb lead equivalence
- Standard size 83cm x 190cm (WxH)
- Standard glass size 68cm x 68cm (WxH)
- Other sizes available on request

**AMS - 076990**
- Multi Purpose Mobile 3 wing screen
- Completely seamless hygienic, easily cleanable PVC finish
- Easy move castors with brake
- 2mm lead core supplied as standard (alternative thickness available)
- Unique flush vision panel design with 2mm Pb lead equivalence
- Standard size 145cm x 190cm (33 + 83 + 33cm)
- Standard glass size 30cm x 40cm (WxH)
- Other sizes available on request
X-Ray Protective Mobile Screen

AMS - 076993

- Height adjustable viewing screen from 115mm to 190mm
- Lead Acrylic upper screen (0.5mmPb lead equiv) provides a wide viewing area
- Laminated lower screen with 1mmPb lead core as standard (alternative lead available)
- Easy move castors with brake
- Optional accessory rail
- Overall dimensions 76cm x 190xm (fully extended)

AMS - 076994

- Height adjustable viewing screen with corner cut-out to extend over patient
- Screen height adjustable from 145cm to 177cm
- Sliding adjustable lower screen to maximise protection at tableside
- 0.5mm protection to upper and lower sections as standard
- Easy move castors with brake
- Ideal where overhead suspension is not available

CONTACT US
We can customise products on this page to meet your design requirements.
To request further information or advice in relation to the contents of this brochure or any of the other products available from Amray, please contact us today:

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Other brochures available from AmRay:

PERSONAL RADIATION PROTECTION
HANGING & MOBILE PROTECTION
ENCAPSULATED DOORS
NUCLEAR MEDICINE
X-RAY VIEWERS

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