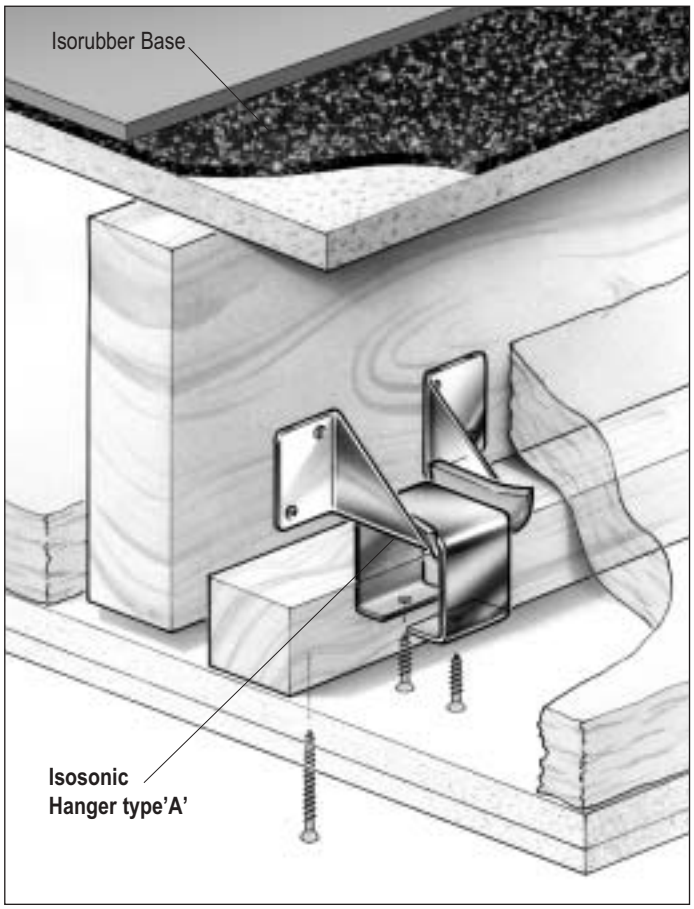
IMPORTANT- Use only genuine ISOSONIC components to ensure high sound insulation performance

INSTALLATION GUIDE

FOR

Isosonic Timberfloor™

SOUND INSULATION SYSTEM FOR TIMBER FLOORS
ROBUST RESILIENT LAYER UNDER FLOOR FINISH



IMPORTANT-

The new SOUND REGULATIONS (July 2003) have introduced extremely demanding sound insulation standards and compulsory "PRE-COMPLETION TESTING"

The need for good workmanship and attention to detail cannot be over emphasised.

It is particularly important to prevent sound leakages around service penetrations and at floor and ceiling perimeters.

The flow of sound can be compared to that of water; a small unplugged hole can undo the work of insulating an entire floor.

The ISOSONIC TIMBER FLOOR has been designed for ease of installation within the limitations of timber floor construction and high performance requirements. This, however, does not alleviate the need for attention to detail and careful workmanship.

INSTRUCTIONS

INSTALLATION OF THE RESILIENT LAYER- GENERAL

The use of 6mm ISORUBBER BASE or 3mm ISORUBBER TOP is optional; depending on the type of finishing surface to be applied.

ISORUBBER BASE is suitable for directly overlaying with l8mm tongue and grooved chipboard or decorative wooden floor of similar weight (approximately 10kg/m^2).

ISORUBBER TOP is suitable as a direct underlay for most types of stone or Ceramic tile finishes.

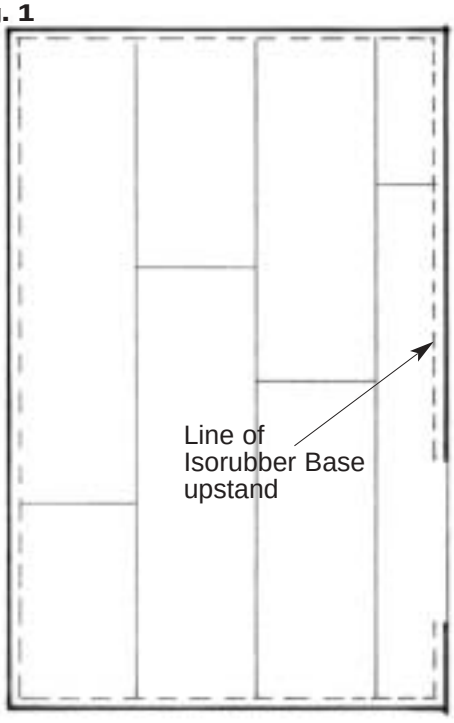
A) PREPARATION OF THE FLOOR SURFACE

- **The floor surface should be flat (maximum 5mm over 3m straight edge) free of debris, or harmful substances. Holes in the floor should be filled and the floor perimeter sealed (see Diag 2)**

B) FITTING THE ISORUBBER BASE

- **Fit the widths of material with all joints tightly butted.**
- **Dress the ISORUBBER BASE up tightly against the perimeter walls, forming a minimum 25mm high up-stand (see Diag 1 & 2).**

Diag. 1



Thermal Economics
THERMAL & SOUND INSULATION TECHNOLOGY

Isosonic Timberfloor™

C) FITTING THE FLOATING FLOOR

- **For the fitting of the floating timber floor follow normal good practice floor laying procedures, or the proprietary manufacturers instructions.**
- **Fit the board material with a minimum 3mm clearance from the ISORUBBER perimeter upstand (see Diag 2).**
- **Where the room width exceeds 5m this gap may need to be increased to allow for expansion. Refer to the board manufacturer for advice.**

D) FITTING THE SKIRTING

- **The ISORUBBER upstand should be trimmed off approximately 3mm above the floor level to provide a clearance between the underside of the skirting and the floor surface (see Diag 2).**

E) FITTING ISORUBBER TOP

- **Ensure that the floor deck is firm and stable. In the case of ceramic or stone finishes it may be necessary to overlay the floor deck with plywood sheeting. ISORUBBER TOP cannot compensate for vibration or movement of the Sub-floor.**
- **ISORUBBER TOP can be adhered to most clean and dry surfaces with the ISOBOND adhesive. Required ambient conditions for ISOBOND application are:**

Temperature	**Minimum l5°c**
	Maximum 45°c
Relative humidity	**Maximum 75°**

- **The adhesive can be applied with a toothed trowel or lambs wool roller.**
- **For ease of fitting allow the adhesive surface to dry out for a minimum of 30 minutes prior to overlaying it with the ISORUBBER TOP.**
- **The ISORUBBER TOP should be rolled out over the adhesive surface with the edges tightly butted. Smooth out the material surface with a broom or roller to ensure full bonding.**

F) FLOOR FINISHES

IMPORTANT

Mechanical fixing of the overlay through ISORUBBER is not permitted as this is likely to be detrimental to the sound insulation performance of the floor

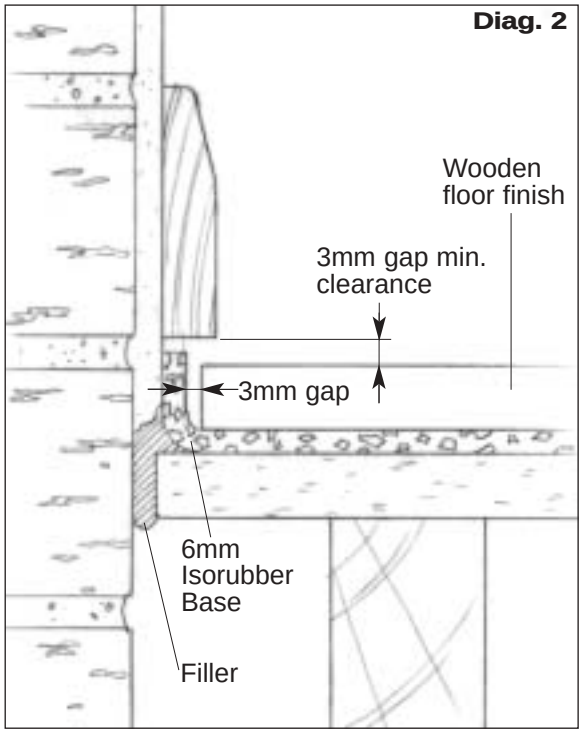
In wet areas such as kitchens and bathrooms the ISORUBBER should be fully protected with a water-resistant surface material.

For floating or glued overlays the following procedures should be observed.

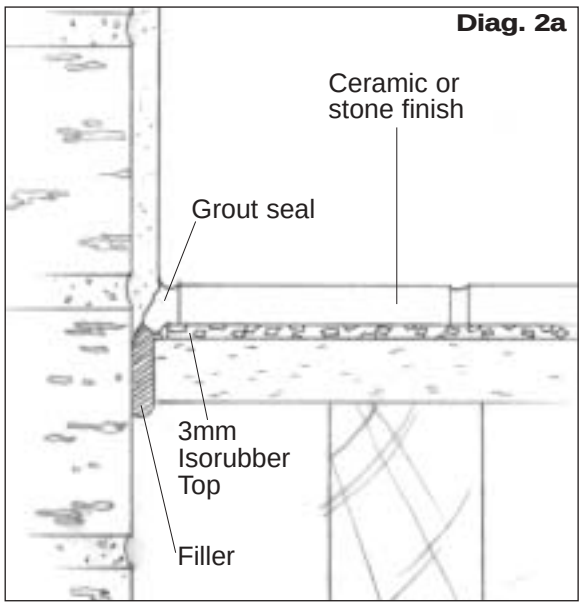
CERAMIC OR STONE TILES

- **Use BAL Fast Flex adhesive or similar and water resistant grout.**
- **Some marbles and porous limestone may be subject to absorption causing discolouring. The application of a surface sealant and special adhesives may become necessary.**

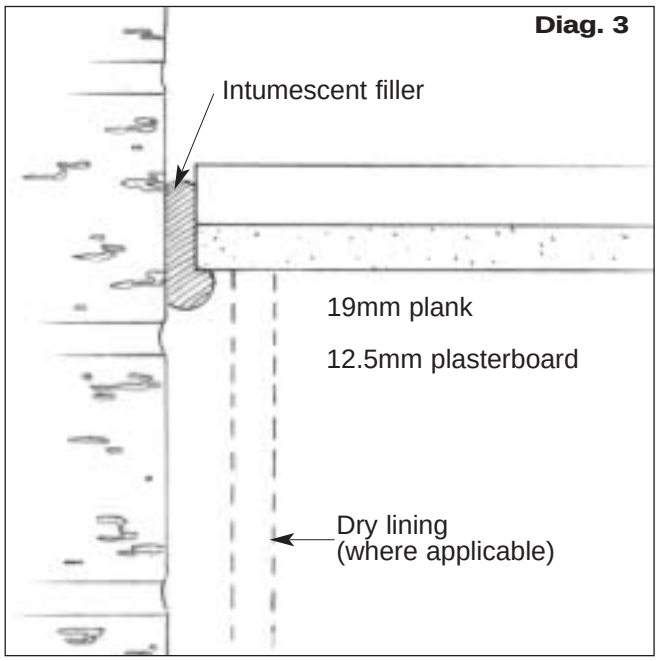
Diag. 2



Diag. 2a



Diag. 3



SOFT FLOOR COVERINGS; LINOLEUM, VINYL AND CARPET.

- **Use the adhesive normally recommended by the floor covering manufacturer.**
- **When applying linoleum, vinyl or similar flexible smooth surface materials care should be taken that the base floor is made as smooth as possible. Ridges, joints and irregularities may otherwise show through.**

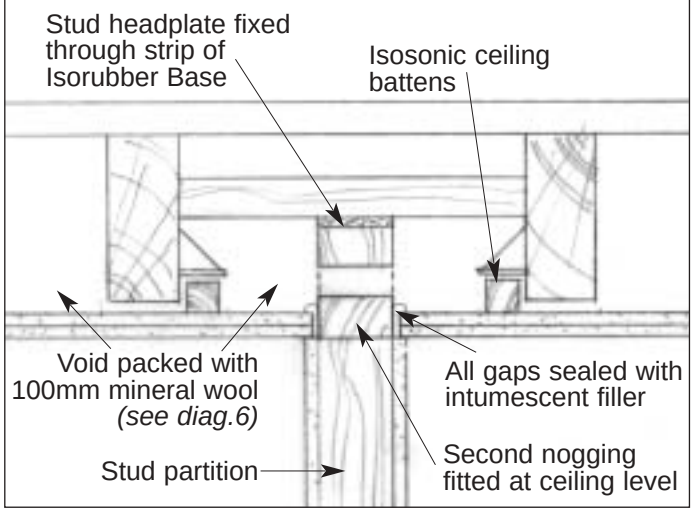
WOOD FLOORS

- **Can be laid as free floating floors or glued with an adhesive recommended by the flooring supplier.**

IMPORTANT- FLANKING SOUND INSULATION

- **When using hard floor coverings ensure that a minimum gap (separation) of 5mm (or greater if recommended by the flooring material supplier) is formed around the perimeter.**
- **This gap should only be filled with a resilient material such as mastic or acrylic kit.**

PARTITIONS RUNNING BETWEEN FLOOR JOISTS



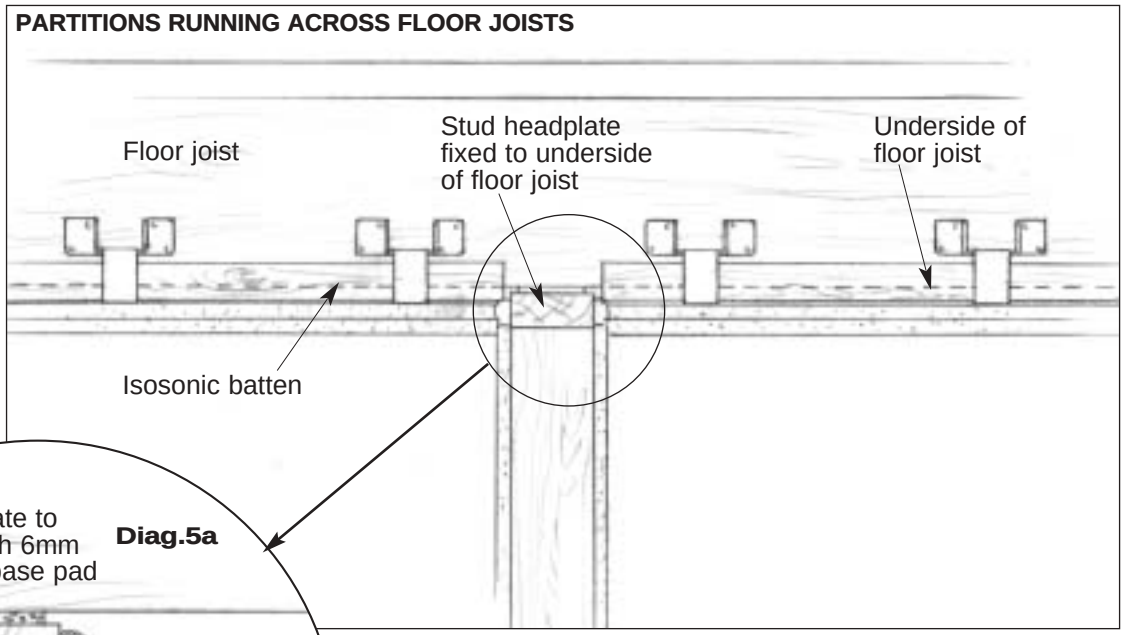
Diag. 4

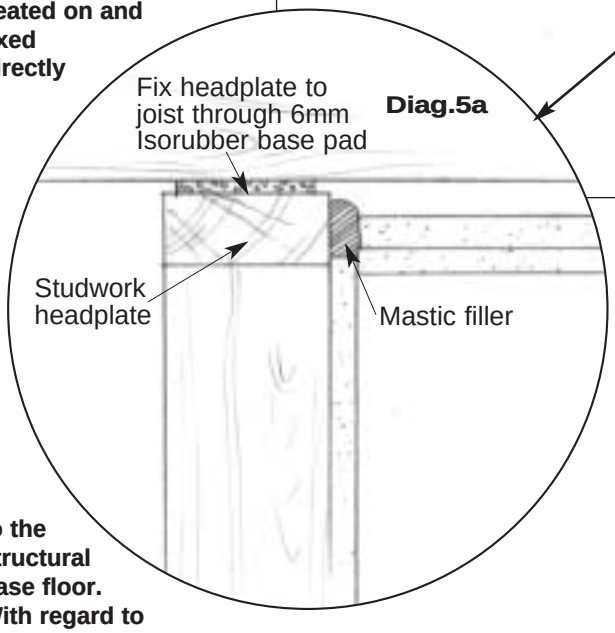
Diag.5

G) STUD PARTITIONS

- **Internal - room dividing NON load bearing stud partitions can be seated on top of the resilient material and fixed through it to the base floor. For the recommended fixing of the ceiling adjoining the partitions (see Diag 4 & 5).**
- **All load bearing and party wall stud partitions should be seated on and fixed directly to the structural base floor.**
- **With regard to the fitting of ISORUBBER and ISOSONIC ceilings the stud wall should be treated as normal external perimeter walls.**

PARTITIONS RUNNING ACROSS FLOOR JOISTS





Diag.5a

H) INSTALLATION OF THE ISOSONIC CEILING

Determine the desired ceiling level.
NB. For sound insulation purposes the clearance between the top of the plasterboard and underside of floor joist should be not less than 5mm. Fit an ISOSONIC HANGER to either end of the batten and fix the bracket to the floor joists at the pre-determined level.

- **Fit all the intermediate ceiling hangers, ensuring that all "slack" is taken up between batten and brackets. Hangers should be spaced at no more than 800mm centres and at no more than l00mm from the unsupported batten end.**
- **Perimeter joists may require battens on both sides, to cover the end bays.**
- **Fit noggings for downlighter boxes and stud partitioning as required (see Diag 4 & 5).**
- **Fit stud partitioning (see Diag 4,5 & 6).**
- **Fit downlighter boxes (see Diag 7).**

J) FITTING THE PLASTERBOARD CEILING

- **CEILING CONSTRUCTION- To conform with the pre-tested systems referred to in the ISOSONIC TIMBERFLOOR LITERATURE the ceiling should be made up of a l9mm plank and a l2.5mm plasterboard.**

Thermal Economics™
THERMAL & SOUND INSULATION TECHNOLOGY

It is advisable to fix the l9mm plank first to the ISOSONIC CEILING Battens.

K) PARTITIONS. The ceiling should run continuously from external/party wall to external/party wall and be close fitted around the partition stud work (see Diag 4 & 5).

L) PERIMETER WALLS. A gap of 5 to l0mm should be left between the perimeter wall and the ceiling edge. This gap is to be filled with an intumescent filler (see Diag 3).

M) DRY LINING. Where dry lining is to be applied to the perimeter walls the ceiling must be installed first in order to prevent sound leakage into the floor void (see Diag 3).

N) MINERAL FIBRE QUILT

The void between the floor joists should be fully filled with a mineral fibre quilt minimum density l0kg/m^2 and minimum thickness 50mm.

The quilt should be cut a minimum l00mm oversize to the joist void and fitted carefully over the top of the ISOSONIC CEILING hangers; ensuring close fitting without gaps (see Diag 6).

It is recommended to fit the quilt from underneath as the l9mm plank is being fixed.

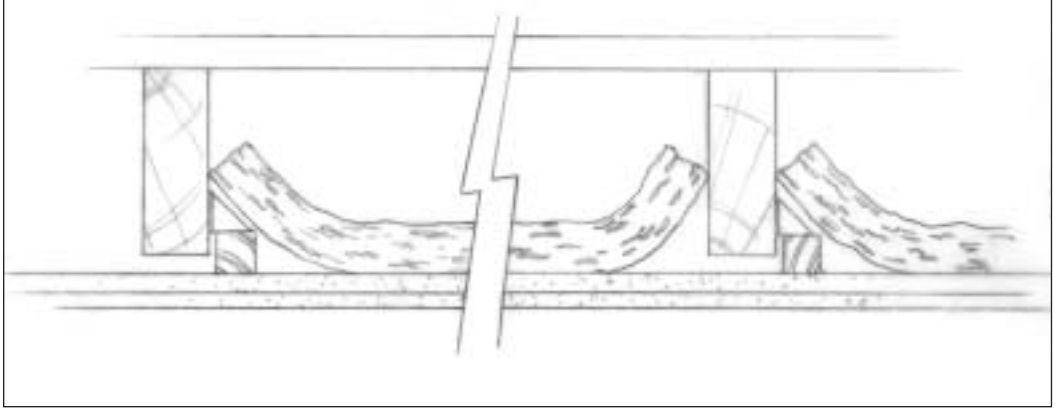
P) DOWNLIGHTERS

It is recommended that individual or small groups of lights should be fitted into isolating boxes made of plywood or plasterboard and fitted within the sound insulating ceiling void (see Diag 6).

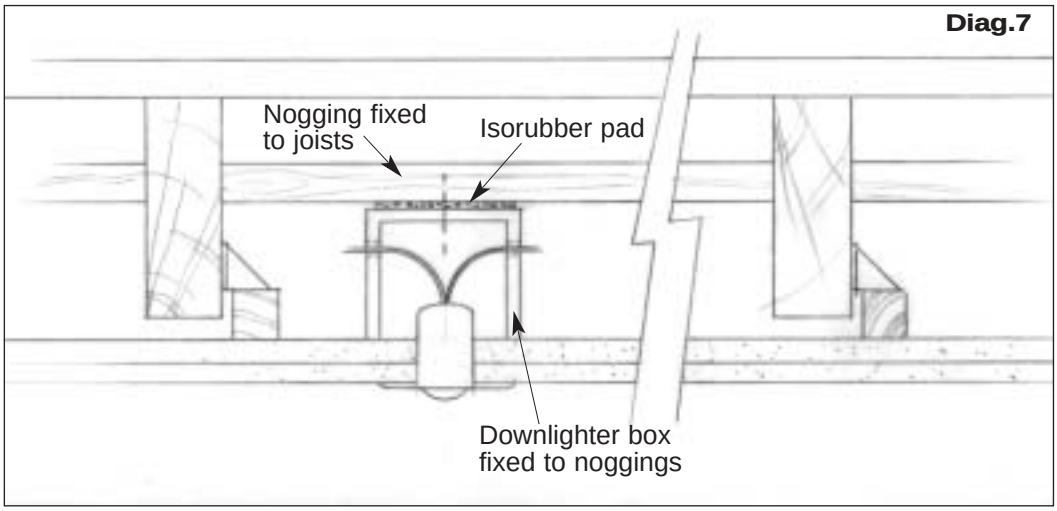
For large clusters of lights a secondary lowered ceiling consisting of a single layer of plasterboard may be more convenient.

Thermal Economics also supply solutions for I-Beam timber floors and concrete floors of all types including beam and block, pre-cast concrete plank and in-situ concrete. Please refer to our website for up to date information.

Diag.6



Diag.7



FOR FURTHER TECHNICAL ADVICE PLEASE CONTACT THERMAL ECONOMICS TECHNICAL DEPARTMENT. TEL: 01582 429305

Thermal Economics Ltd Thermal House
8 Cardiff Road Luton Bedfordshire LU1 1PP
Tel:01582 450814 Fax:01582 429305
E-mail:info@thermal-economics.co.uk
Web:www.thermal-economics.co.uk

Thermal Economics™
THERMAL & SOUND INSULATION TECHNOLOGY