isocheck™
acoustic insulating products

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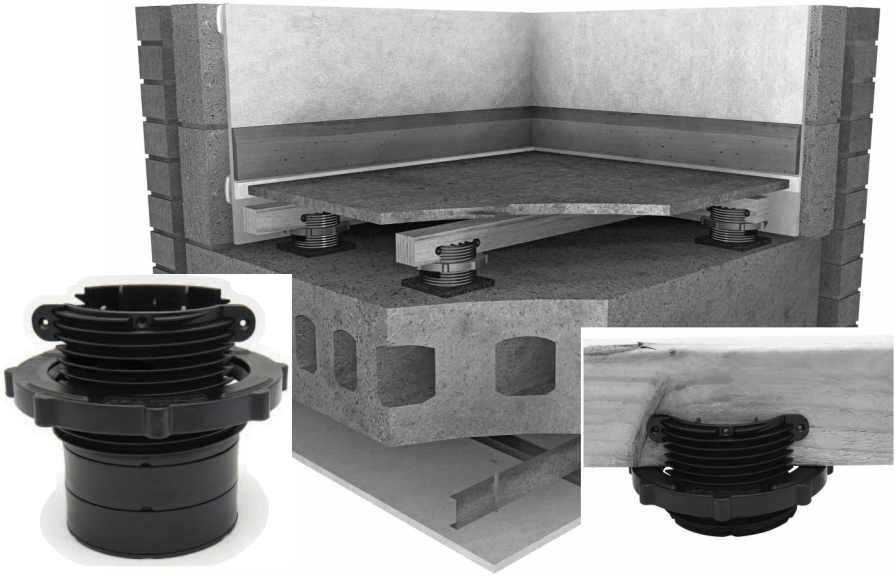
One of the isomass systems range

Adjustable Acoustic Cradle System

Installation instructions



SUSPENDED SYSTEM FOR UNEVEN CONCRETE FLOORS

- New build
- Conversions
- In conjunction with underfloor heating systems
- Adjustable support for flat roof terraces

E1 NEWBUILD · E1 CHANGE · Rd ROBUST · N · C

Institute of Acoustics 50 1974–2024 Sound • Noise • Vibration
Sponsoring Organisation

MADE IN THE UK

QAS International ISO 9001:2015 REGISTERED COMPANY

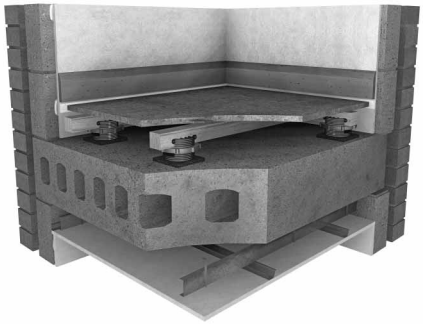
9 ABS

PRODUCT DATA

Overall size inc resilient layer:	128.4mm diameter x 70mm height
Resilient layer:	100mm x 100mm x 5mm Isopoli HD
Min. Max. raise *without elevating piece*	20mm - 56mm

DESCRIPTION

- ❏ The Isocheck adjustable Acoustic Cradle system is designed to reduce sound transmission through concrete floors.
- ❏ To be used over hollow core, in-situ or supported metal deck concrete floors for new build or conversions and with decking in an inverted flat roof (see detail right).
- ❏ Isocheck cradle systems are dry floating floors which provide an easily levelled under structure for supporting chipboard, plywood or hardboard flooring.



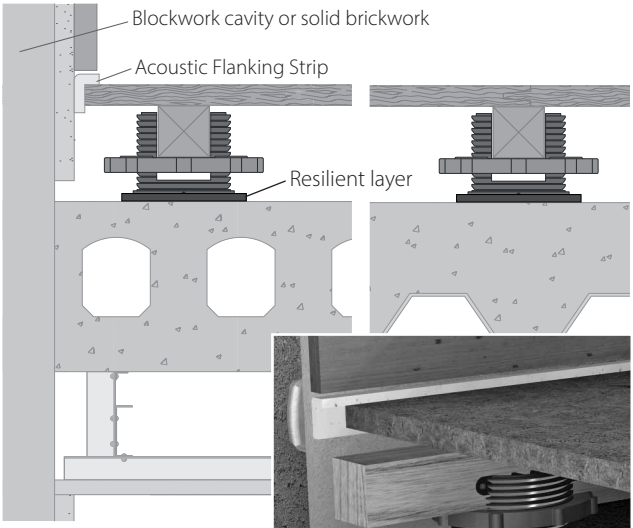
- 18mm or 22mm chipboard floor over Isocheck Cradle with a (commonly used) strength-graded 45mm x 45mm batten @ 400mm centres.
- min. 150mm hollow core concrete plank min. 300kg/m^2 excluding screed ***or*** 130mm min. in-situ concrete (80mm min. fully supported) on profiled metal deck.
- metal frame suspended ceiling with 75mm void and 10kg/m^2 plasterboard ***or*** with100mm void and 8kg/m^2 plasterboard.

PREPARATION

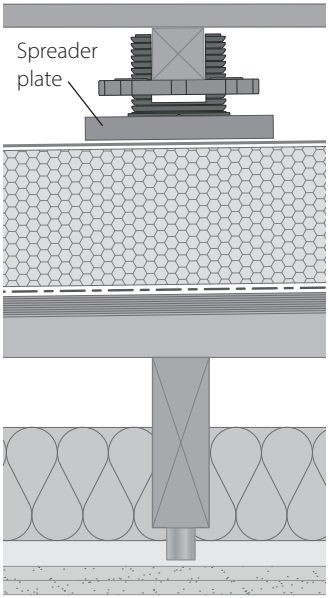
- ❏ Concrete ground level supported floors must have a damp proof membrane and screed complying with the appropriate Codes of Practice and Building Regulations.
- ❏ Areas of structural floor beneath each intended cradle position should be smooth, flat and level to facilitate ease of the batten installation.
- ❏ The building must be weatherproof and all wet trades completely dried out before commencing installation of the flooring system. All joints and air paths between concrete units and at perimeter walls must be carefully and thoroughly grouted for effective performance of acoustic floors. Components exposed to wet conditions such as ingress of rain or plumbing leaks should be discarded and replaced.
- ❏ Excessive moisture from cast in-situ slabs and screeds which have not dried out can have adverse effects on flooring materials and timber components.
- ❏ The provision of access to services is most successful if the location of services is detailed at an early stage. Services should be kept at least 150mm away from walls to allow space for perimeter support battens.
- ❏ BS 8201:2011 states that "it is reasonable to recommend that the concrete be considered dry when the relative humidity falls to 75% or less" (when tested by use of a hygrometer). Where the dryness of concrete can not be guaranteed it is recommended that a vapour barrier is installed (minimum 1000 gauge).

PARTITIONS

- ❏ Masonry internal non load bearing partitions should be erected from the sub-floor and not on top of the floating floor.
- ❏ Lightweight timber or metal stud partitions with plasterboard linings may be constructed from the floating floor by forming a ladder frame structure directly beneath the sole plate using noggins of approx. 100mm supported on Cradles.



Flanking Strip turned back under skirting.



- ❏ The position of the partitions should be marked on the structural floor before commencing the floor installation to ensure satisfactory support is provided and that services are correctly positioned.

AREAS OF HEAVY LOADING

- ❏ In areas where heavy loadings are anticipated, such as kitchens and bathrooms the Cradle centres should be reduced to 300mm. In cases of extraordinary loading, contact the specifier or Isomass for advice. Storage heaters are considered to be an extraordinary loading and will require support direct from the sub-floor, independent of the flooring system. Isomass's Sales Department are available to provide advice where required.

ACCESS PANELS

- ❏ Access panels should be square edged and supported along all edges by support battens.
- ❏ The panels should be screwed to the battens without bridging the resilient layer.

If in doubt on any area, please call Isomass prior to commencement of work.

INSTALLATION - CRADLES AND SUPPORT BATTENS

- ❏ Cradles and support battens must be laid in accordance with specified centres.
- ❏ To ensure consistent levels throughout the building, commence in corridor areas proceeding to rooms. In each area work to a datum using isocheck packers and elevating blocks to overcome low areas or cambers. Ensure that each Cradle is sitting on a 100mm x 100mm x 5mm resilient layer. Cradles should not rock or lie at an angle.
- ❏ Set out the Cradles and support battens around the perimeter of the room so that the battens are approximately 50mm from perimeter walls. Then lay the remainder of battens levelling using the adjustable ring. Screw fix the Cradles to the battens.
- ❏ Where support battens meet, Cradles should be positioned so that they equally support both ends.
- ❏ When laying alternate rows of support battens, commence with a half-length so that the joints are staggered.

INSTALLATION - SERVICES

- ❏ With the adjustable ring raised from it's lower setting there may be space for some services to run beneath the support battens.
- ❏ To increase the space for services fit one or more extension piece to the bottom of the adjustable Cradle. In acoustic systems ensure that gaps where services come through the flooring are sealed to prevent airborne sound leakage.
- ❏ Do not notch support Battens.

INSTALLATION - ADJUSTMENT

- ❏ In order to achieve a level floor, adjust the Cradles using the adjustment ring. Cradle's are adjustable by 36mm.
- ❏ If additional height is required, use the 20mm deep elevating pieces - these clip into the base of the Cradle. Up to 3 elevating pieces can be used on a single Cradle.
- ❏ To add the elevating pieces, first unclip the base piece from the Cradle. Clip in the elevating piece(s) and clip the base piece to the underside of the bottom elevating piece.
- ❏ Ensure the cradle elements are all centrally positioned above the resilient layer (which is spot bonded with a single dab of silicon each side). This will prevent any unwanted movement from the assembly over time.

INSTALLATION - PERIMETERS

- ❏ Ensure that there is an expansion gap of at least 5mm between the edges of the flooring and at the perimeter walls. This gap must also be maintained at doorframes and filled with an angled Flanking Strip.

INSTALLATION - THRESHOLDS

- ❏ A support batten on Cradles should be placed across the threshold for additional support. The chipboard should be configured so as to ensure no but joints are present.

INSTALLATION - FLANKING STRIP

- ❏ Insert the 5mm thick 'L' shaped Acoustic Flanking Strip around the perimeter of the room in the 10mm gap between the flooring and the perimeter wall. When the skirting board is being fixed to the wall lightly trap the Flanking Strip between the bottom of the skirting and the flooring panel and neatly trim off the excess.
- ❏ It is essential to isolate the skirting from the floor surface to prevent impact sound flanking transmission.

INSTALLATION - ROOF TERRACE

- ❏ Use lengths of string to mark the finished patio height across the whole area.
- ❏ Support terrace deck on adjustable Cradle's with a (commonly used) strength-graded 45mm x 45mm (or higher) batten @ 400mm max. centres. If required, the Cradles can be placed on WBP plywood spreader plates.
- ❏ Set out the Cradles and support battens around the perimeter of the roof so that the battens are approximately 50mm from perimeter walls.
- ❏ Place a spirit level on top of the terrace and adjust Cradle's until it is level. Do not stand on the terrace while adjusting the Cradle underneath it.

Every effort has been taken in the preparation of this sheet to ensure the accuracy of representations contained herein. Recommendations as to the use of materials, construction details and methods of installation are given in good faith and relate to typical situations. However, every site has different characteristics and reliance should not be placed upon the foregoing recommendations. Advice can be given as to specific applications of the products, upon request to isomass building products.

isomass® building acoustics

Unit 14 Papworth Business Park, Stirling Way,
Papworth Everard, Cambridgeshire CB23 3GY

Tel: 0330 175 8228 • Email: info@isomass.co.uk • www.isomass.co.uk