

INSTALLATION INSTRUCTIONS

High Performance Acoustic Cradles with Floor Levelling System

Recycled rubber crumb cradles for use in New Build, Refurbishment and Conversion Projects. InstaCradle is suitable for both Commercial and Domestic applications on concrete and timber sub-floors.

As part of a cradle and batten system, the system is designed as either a raised floor accommodating underfloor services, or as a floor offering extremely high standards of acoustic performance.

Manufactured using recycled rubber crumb. Guaranteed for 60 Years.
Acoustic Cradle Sizes: 40mm Leg, 20mm Base / 25mm Leg, 20mm Base / 25mm Leg, 10mm Base.

The following instructions are issued as an aid to the correct installation procedures. Individual site conditions may necessitate variances to these standard instructions. Such cases should be referred to the InstaFloor Technical Department for approval. All installation and working practices should be in accordance with relevant Codes of Practice, current Standards and HSE Regulations applicable to the construction industry.

SITE PREPARATION

- If a screed has been applied it must be fully cured before beginning the installation of the cradle and batten system.
- Building to be dry and weather-tight.
- All flooring materials to be stored in safe, dry conditions.
- Adhesives should not be subjected to temperatures beyond those recommended by the manufacturer.
- The floor receiving the cradle and batten system must be hard, dry, free of all debris and reasonably smooth (tamped finishes are acceptable).
- All beam and block or concrete plank floors should be fully grouted at all joints and perimeters.

REQUIRED TOOLING

- Laser Level
- Circular Saw
- Jigsaw
- Handsaw
- Pencil
- Utility Knife
- Chalk String Line
- Battery Drill
- Countersink Bit
- Tape Measure



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1. **Damp Proof Membrane (Optional)** – A damp proof membrane is recommended on ground floor slabs and new concrete bases above ground level (see points to note).

2. **Batten Spacings** – Start, usually at the furthest point from the doorway, by measuring out the batten centres. For example, for the C40 system, mark out every 400mm to give the correct batten centres. At the opposite side of the room, mark out the same spacings and, using a chalk string line, ‘ping’ or mark between the matching marked points.



3. **Cradle Spacings** – Measure out the cradle centres along the batten chalk lines. The cradle spacings vary according to which batten is being used. For example, for the C40 system with a 43mm deep batten, the cradle will be at 600mm centres. Using this example, measure 600mm along the chalk lines, starting from the same end and mark or ‘ping’ a chalk line between the corresponding points to create a grid.



4. **Cradle Positioning** – Place the cradles around the perimeter on all the marked points and at each chalk line intersection. At the perimeter, ensure a 10mm gap between the wall and the cradle edge.



5. **Floor Height Variations** – Using a laser levelling system, establish the highest datum point of the floor. Working from the highest point, calculate the difference between datum point and every cradle and write the figure, on the floor, next to each cradle.



6. **Height Adjustment** – Inset the appropriate quantity and combination of 2mm and 5mm cradle packers into each cradle equal to the noted height difference, e.g. 6mm = 3 x 2mm cradle packers; 14mm = 2 x 5mm + 2 x 2mm cradle packers. The cradle packers should be placed in line with the direction of the battens. When packing under the join of two or three battens make sure the cradle packer is supporting all battens. Cradle packers can be used to a maximum of 5mm below the top of the cradle leg. Additional height can be achieved by using 10mm and 30mm base packers.



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7. **Batten Placement** – Insert the battens into the cradles. Start around the perimeter and then along the original ‘ping’ lines. Battens should be laid in a staggered formation and all battens must join within a cradle.



8. **Thermal or Acoustic Insulation (Optional)** – If required, the thermal or acoustic insulation should be laid between the battens.



9. **Laying The Chipboard or Plywood** –

- Apply a suitable adhesive to the top of the battens and lay the boards at 90° to the battens.
- A 10mm gap around the perimeter must be maintained.
- As the boards are laid, the adhesive should be applied to the tongue and groove edges of the boards.
- Boards should be laid in a staggered formation ensuring joins are a minimum of 150mm apart.
- Edges on the short side of the boards must join on a batten.
- The boards are screwed down using countersunk wood screws. Perimeter fixings on the long edge of the boards should not exceed 600mm. Fixing centres along the battens should be at 300mm and 150mm from the long edge perimeter. Where boards join on the short edges, they should be screwed down in two places, both sides of the join.



10. **Resilient Flanking Strip** – Place the resilient flanking strip around the perimeter of the room between the wall and the cradles. After the skirting has been fitted, trim the surplus flanking strip with a utility knife.



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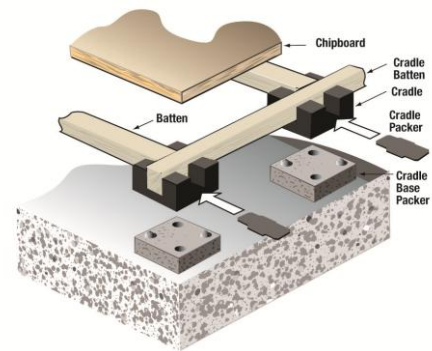
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SOUND INSULATION

InstaCradle provides an excellent solution for reducing impact sound. As InstaCradle is made using recycled rubber crumb, this gives a high quality, long lasting performance providing significant noise reduction and exceptional support to all floor coverings.

As with all InstaFloor systems, acoustic performance is substantiated with UKAS accredited test data or field tests confirming its performance (test data is available on request).



UNDERFLOOR HEATING

Underfloor heating can be used in conjunction with the cradle and batten system.



CERAMIC TILES

InstaFloor system CK30 is suitable to receive ceramic tiles and consists of 18mm or 22mm WBP Plywood, Acoustic Cradles at 300mm centres and battens at 300mm centres, in conjunction with Johnson Speed-Flex adhesive and Johnson Wide Joint Grout with flexible adhesive, as tested by Norcros Adhesives Limited and subject to their specification.

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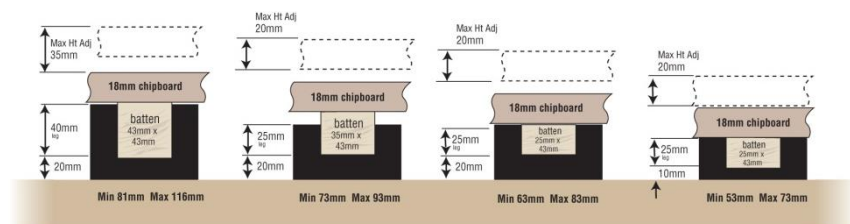
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POINTS TO NOTE

- **Damp Proof Membrane (if required)** – A membrane, such as a 1200 gauge polythene sheeting, should be installed over all ground floor slabs and new concrete bases above ground floor level. Joints should be lapped a minimum of 150mm, and should be taped and sealed with waterproof adhesive tape, with edges upturned to the same height as the overlay boards at all perimeter walls.
- **Services** – If there is insufficient room to run services beneath the battens, services may be accommodated by cutting the battens and passing the service through the batten. Support the cut batten, leaving a 10mm – 15mm clearance from the service, with additional cradles supporting the cut battens. **Never notch the battens.** Services running at the perimeter of the room must be a minimum of 150mm from the perimeter, and should not be grouped any wider than the available space between the battens.
- **Intermediate Board Support** – When the short end of the overlay boards do not join on a batten, they should be supported with intermediate cradles and battens. Where boards join without being tongued and grooved, such as in doorways, support the join with intermediate cradles and battens. Screw and glue the boards to the batten with a 2mm gap between the edges of the boards to avoid squeaking.
- **Hardwood Flooring** – It is possible to fix hardwood flooring directly onto the battens in lieu of the overlay boards. For further information please refer to the InstaFloor Technical Department or the hardwood flooring manufacturer.
- **Abnormal Loading** – If the cradle and batten system is to be subjected to abnormal loading, it may require the use of additional acoustic cradles.
- **Expansion Joints** – Expansion joints may be required in long corridors.
- **Height Adjustment** – A finished floor height greater than the standard batten sizes can be achieved with either deeper battens / joists or base packers. Depending upon the required finished floor height, InstaFloor will provide guidance as to the most cost-effective method. Final height adjustment can be carried out by using 2mm or 5mm cradle packers.



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CRADLE AND BATTEN SPACING

SYSTEM	WEIGHT (Kg/m ²)	BATTEN SIZE (mm) Width x Depth	CRADLE SPACINGS (mm)	BATTEN SPACINGS (mm)	CHIPBOARD (mm)	PLYWOOD (mm)
C30	25	43 x 43	600	300	18 or 22	-
		43 x 35	450	300	18 or 22	-
		43 x 25	300	300	18 or 22	-
CK30	25	43 x 43	300	300	-	18 or 22
		43 x 35	300	300	-	18 or 22
		43 x 25	300	300	-	18 or 22
C40	25	43 x 43	600	400	18 or 22	18 or 22
		43 x 35	450	400	18 or 22	18 or 22
		43 x 25	300	400	18 or 22	18 or 22
C60	25	43 x 43	600	600	22	22
		43 x 35	450	600	22	22
		43 x 25	300	600	22	22

Please note

- When using ceramic tile, stone or marble floor finishes, it is recommended that system CK30 is used.
- Batten spacings may be adjusted to suit room sizes to minimise waste provided the maximum batten spacings are not exceeded.

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