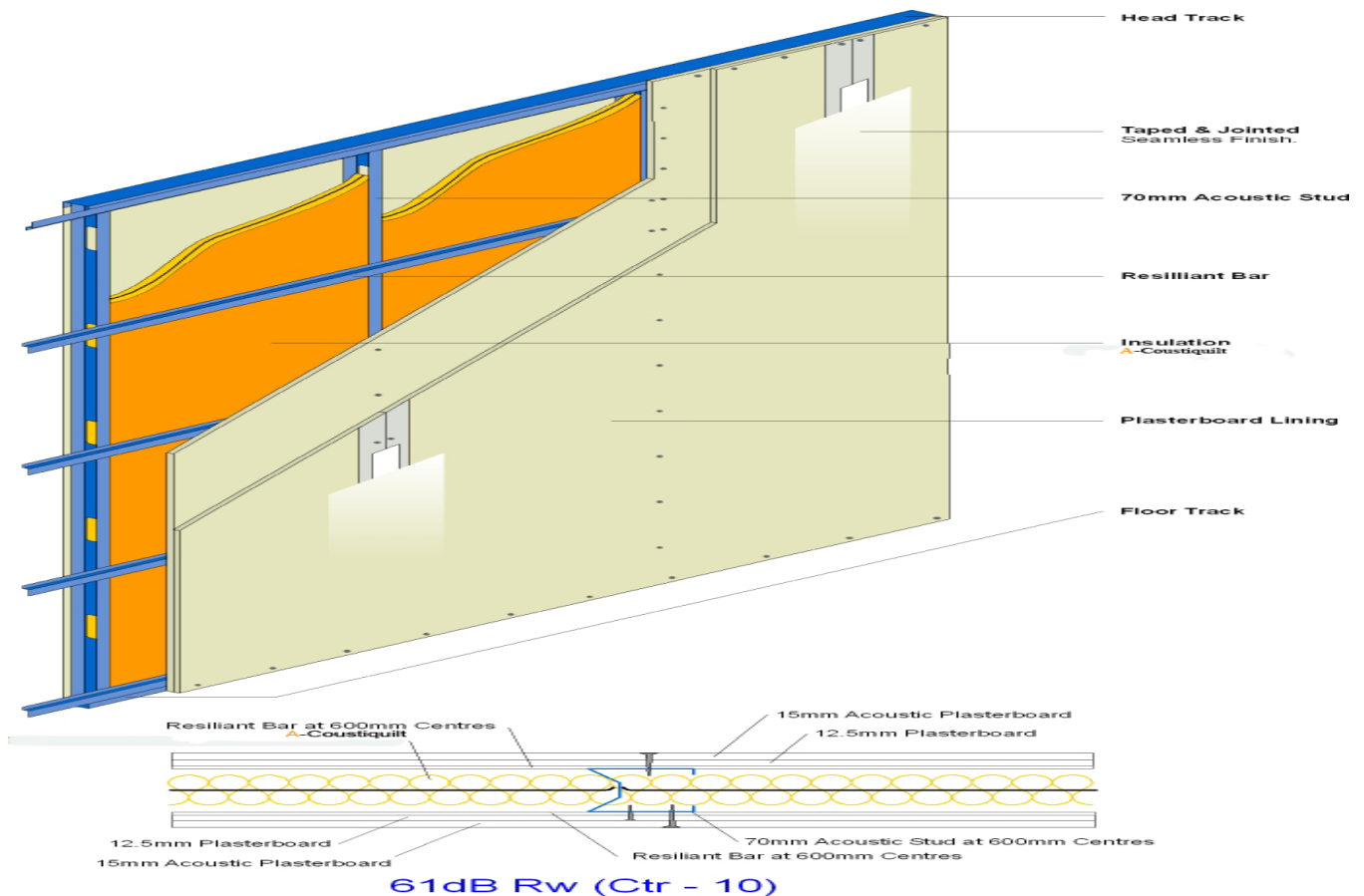


Technical Installation Guide Number 2

Separating Metal and Timber Stud Walls Installation Procedure



General

Partitions must be installed in accordance with Drywall recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994. This guidance describes a single metal frame stud. The principal also applies where timber is used and where a double stud partition (metal or timber) is used, with or without resilient bars.

Perimeter Framing

'U' Channels should be used for the head and base of the partition. C-Studs should be used to form any abutments to frame openings. Bed each section on two continuous beads of A-cousti Fix and Seal and secure with nailable plugs at maximum 600mm centres and 50mm from ends of channels or studs. Separate studs and channels forming the perimeter need not be joined, but should be tightly butted together. Replace 'U' Channel with a Deep Flange 'U' Channel when forming a deflection head. Partitions should always run up to the structural soffit. Where an existing suspended ceiling cannot be cut back to allow for partitioning, bracing must be provided for lateral support at the partition head.

Vertical Studs

Studs should be positioned within the channels to coincide with the abutments of the boards, which will be fixed later. In general there is no requirement to secure the metal at this point as this will be achieved once the boards are screw-fixed.

'C' and 'I' Studs should be trimmed to within 5mm of the internal channel. For deflection heads only, studs should be cut short to allow for required clearance within Deep Flange 'U' Channel, up to a maximum of 25mm. 'C' Studs can be extended by forming an overlap, boxing them at that point and securing them with Wafer Head Screws. The overlap must be at least 600mm.

Resilient Bars

Fix the resilient bars across the framing to one side at 600 centres using wafer head screws. The bars should be joined by nesting them together over a stud, with the base flange fixed to the stud. The bars are normally fixed with the base flange on the top side, with the exception of the uppermost bar which is fixed flange down to provide board fixing at the wall perimeter

Facings

A layer of 12.5mm Plasterboard is then offered up to the Resilient Bars. The boards should be fully screwed with 25mm Drywall Screws at 200mm centres. After fixing the first layer, ensure that any joints and gaps in the lining are filled with Jointing Products. It is not required to finish the joints. A second layer of 15mm Acoustic Plasterboard is then offered up, fully overlapping the first board (by 600mm) so that all the board joints are covered. Screw-fix with 42mm Drywall Screws at 200mm centres. Again, ensure at this stage that any gaps in the lining are filled with A-cousti Fix and Seal prior to any surface finishing system.

A-Coustiquilt

A-Coustiquilt is supplied in rolls 5m long in 400mm, 600mm or 1200mm widths, 52mm thick.

Once one side of the frame has been boarded the A-Coustiquilt should be inserted between the studs vertically. Care should be taken to ensure that the insulation is fitted neatly without gaps at abutments or vertically between different rolls. The material can be secured in position using a metal, or wooden batten screwed through to the 'U' Channel at soffit and floor, ensuring that a generous overlap is allowed at top and bottom to give a complete seal.

Support for Horizontal Joints in Facings

To back horizontal joints in outer board layers, Fixing Channel or Flat Fixing Plate should be fitted across the face of all studs, secured with 2 Wafer Head Jack point Screws per stud to both faces. Repeat Facing instructions to the front of frame.

Doorways

The head is formed with 'U' Channel, bent back and screw fixed with Wafer Head Jack point Screws to the studs. For a lightweight door weighing up to 25kg, 'C' Studs are used for the frame openings inserted with treated timber of 38mm thickness, cut to the size of the stud. For doors weighing up to 50kg, fully 'boxed' 'C' Studs are used for the frame openings inserted with treated timber of 38mm thickness, cut to the size of the stud.

Boarding

All boards should be offered up to the frame with the face of the board outwards and secured with Drywall Screws at 300mm centres. Fixing centres should be reduced to 200mm at corners. Boarding should commence at one end and work across the partition. At head, foot and abutments, board edges should be bedded on to continuous beads of A-cousti Fix and Seal Sealant. Board joints in multiple layers should be staggered both vertically and horizontally by at least 600mm.

FINISHING

Taping and jointing

To achieve a seamless finish on tapered edge boards, SIL provide a complete range of jointing compounds and reinforcing tapes that allows selection by speed, ease of application and working characteristics. As soon as the joints have dried, apply one coat of Wallboard Primer over the plasterboards and joints to equalise suction levels between the joints and the boards, or two coats for improved surface vapour resistance.

Skimming

A 2 to 5mm veneer coat is applied to the face of the plasterboards. The board joints should be reinforced with either paper or fibre tape.

Decoration

For heavy type vinyl backed wall coverings reference should be made to the manufacturer for priming treatments.

Health & Safety

Both plasterboard and metal must be cut to length and this should be done in well ventilated areas paying attention to the cut edges of metal sections which may be sharp.

DESIGN CONSIDERATIONS & LIMITATIONS

This section identifies the areas that require careful consideration to ensure that the selected system meets the desired performance levels. When higher specification requirements are needed, contact Sheffield Insulations Limited for guidance.

Suspension

Ensure the background is suitable to support the Speedline Resilient Bars and fixings.

Surface Fixings

Consider the weight and leverage of any fixing prior to construction.

Facings

Depending on the performance requirements choose the appropriate outer facings.

Fixings

Ensure Drywall Screws of appropriate length to allow minimum penetration of 10mm through steelwork.

Movement Control Joints Movement control joints are generally recommended at maximum 10m intervals in straight ceiling runs. They should also be installed to coincide with any movement joints in the structure.

Movement Control Joints provide up to 7mm of lateral movement.

Finishing

Taping and jointing

Ensure the facing is a tapered edge plasterboard to accommodate for taping and jointing. As soon as the joints have dried, one coat of Wallboard Primer should be applied to the dry lined surface. This will reduce moisture absorption and the risk of discolouration.

Skimming

It is recommended to use a square edge board as a facing. Consider the extra 2 to 5mm veneer coat of plaster to the overall ceiling thickness.

Limitations

The Separating Wall solution can be used in every normal application; however there are some extreme circumstances where plasterboard is not suitable:

- Temperatures over 50°C can induce a change of state in the plasterboard which could reduce its physical performance and serviceability.
- Constant humidity over 90% (95% if using moisture resistant boards) or continuous subjection to water will also reduce the serviceability of the plasterboard.

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