

**E2DFA90**

**Direct Fixed Clip - Floor/Ceiling**

Load Bearing

2 Layers: 2 Layers of Plasterboard to underside of frame

Full Intertency **A**coustic

System Number	Lining Suffix	Fire Rating	Load Bearing Ability	Noise Control			Lining Requirement
				STC	Rw	IIC*	
<b>E2DFA90</b>	<b>-FM29</b>	90/90/90	LB	57	56	47-73	1 x 16mm Elephant FireSmart and 1 x 13mm Elephant MultiSmart
	<b>-F32</b>	90/90/90	LB	58	57	47-73	2 x 16mm Elephant FireSmart

**Framing**

Timber floor joists shall comply with NZS3604 with a minimum depth of 190 x 45mm and spaced at no more than 600mm centres. Alternatively, a proprietary I-joist system with a minimum depth of 190mm and spaced at no more than 600mm centres may be used subject to specific structural design and approved by the normal building consent process.

Consult the joist manufacturer regarding construction of the solid blocking contained in the floor/ceiling to wall junctions.

**Flooring**

Flooring shall be 20mm thick particle board of 17mm thick structural ply, fixed to the joists as per manufacturer's instructions. Flooring sheet joints must have a polypropylene tongue and groove jointer or be formed over framing.

**Acoustic Clip and Battens**

The Acoustic Clip shall be fastened to the joists at 1200mm centres maximum (and no less than 900mm centres) to support the metal ceiling battens which are spaced at 600mm centres maximum. Use 3 x 32mm x 8g Wafer Head screws. Insert first screw into the middle slot. Adjust clip to correct height. Then insert remaining two screws. A minimum 10mm gap is recommended between the flange of the ceiling batten and the underside of the joist.

**Ceiling Sound Absorber**

Install Sound Absorber between the joists above the metal ceiling battens. Use minimum 75mm thick R1.8 glass wool blanket.

N.B. Consider Minimum Thermal Requirements.

**Plasterboard Lining**

Two layers of Elephant Plasterboard as per specified system above fixed at right angles to the metal ceiling battens. All sheet end butt joints shall occur on the battens. Offset the outer layer by 600mm from the inner layer. Sheet joints should be touched fitted.

**Fixing the Lining**

**Fasteners (As per Specified System Above)**

System Number	1 <sup>st</sup> Layer	2 <sup>nd</sup> Layer
	Self-Tapping Drywall Screws	
<b>E2DFA90-FM29</b>	16mm	13mm
	32 x 6g	41 x 6g
<b>E2DFA90-F32</b>	16mm	16mm
	32 x 6g	51 x 7g

**Fastening Centre**

Ceiling sheets shall be fixed at 200mm centres along each metal ceiling batten.

Fix butt ends at 100mm centres.

Fasteners to be placed no closer than 12mm from sheet edge.

Avoid outer layer screws from hitting inner layer screws.

**Acoustic Sealant**

A bead of fire retardant Acoustic Sealant must be applied around the perimeter of the first layer and the second layer bedded on the bead.

**Wall/Ceiling Junction**

The internal angle between the ceilings and walls must be protected by Cornice or square stopped corners taped and filled in accordance with Elephant Plasterboard Installation Guide.

**Jointing**

Inner layer: Unstopped.

Outer Layer: All fastener heads stopped and all sheet joints reinforced with paper jointing tape and stopped in accordance with the publication entitled Elephant Plasterboard Installation Guide.

**\*Impact Insulation Class (IIC)**

IIC of 47 is achieved with a bare floor.

IIC of 48 is achieved with loose laid Vinyl.

IIC of 71 is achieved with 40oz loop pile carpet on 8mm foam chip underlay.

IIC of 73 is achieved with 40oz loop pile carpet on waffle underlay.

