

**E3DF120**

**Direct Fix Clip Floor/Ceiling**

**Load Bearing**

**3** Layers: 3 Layers of Plasterboard to underside side of frame

System Number	Lining Suffix	Fire Rating	Load Bearing Ability	Noise Control			Lining Requirement
				STC	Rw	IIC	
<b>E3DF120</b>	<b>-M39</b>	120/120/120	LB	54	53	43	3 x 13mm Elephant MultiSmart

**Floor Framing**

Timber floor joists shall comply with NZS3604 with a minimum depth of 190mm x 45mm and spaced at no more than 600mm centres. Solid strutting is required in accordance with NZS 3604.

Nogs fixed on the flat to receive the ends of flooring material shall be 90mm x 45mm minimum.

**Flooring**

Flooring shall be 20mm thick particle board or 17mm thick structural ply, fixed to the joists as per manufacturer's instructions.

Flooring sheet joints must either be formed over framing or have a polypropylene tongue and groove jointer.

**Clip and Battens**

The Clip shall be fastened to the joists at 1200mm centres maximum (and no less than 900mm centres) to support the metal ceiling battens. They 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.

Perimeter channels are required to receive the ends of the metal ceiling battens.

Wall angles or perimeter channels required at wall/ceiling junctions parallel to the metal ceiling battens.

**Plasterboard Lining**

Three layers of 13mm Elephant MultiSmart 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. Sheets shall be touch fitted.

**Fixing the Lining**

**Fasteners**

System Number	1 <sup>st</sup> Layer	2 <sup>nd</sup> Layer	3 <sup>rd</sup> Layer
	Self-Tapping Drywall Screws		
<b>E3DF120-M39</b>	13mm	13mm	13mm
	32 x 6g	41 x 6g	51 x 7g

**Fastening Centres**

For all layers, ceiling sheets shall be fixed at 200mm centres along each metal ceiling batten and around ceiling perimeter.

Fix butt ends at 100mm centres.

Place fasteners no closer than 12mm from sheet edges.

Place fasteners no closer than 18mm from sheet ends. However this can be reduced to 12mm if sheet ends occur on metal ceiling battens.

Avoid outer layer screws from hitting inner layer screws.

**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**

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.

