

**E4SDLA45** **Double Steel Frame** **Load Bearing** **Two Way FRR**

**4** Layers: 2 Layers of Plasterboard to each side of frame **Full Intertency Acoustic**

System Number	Lining Suffix	Fire Rating	Load Bearing Ability	Noise Control*		Lining Requirement
				STC	Rw	
<b>E4SDLA45</b>	<b>-S52</b>	45/45/45	LB	61	60	2 x 13mm Elephant Standard on One side 2 x 13mm Elephant Standard to Other side
	<b>-M40</b>	45/45/45	LB	61	60	2 x 10mm Elephant MultiSmart on One side 2 x 10mm Elephant MultiSmart to Other side

\*Acoustic Performance improves with increase of Partition Width. See 'Minimum Partition Width' Table below.

**Framing**

**Double Frame** - Any steel frame designed to meet structural criteria for strength and serviceability under dead and live loads.

Stud width shall be 35mm minimum.

Stud spacing's at 600 centres maximum. Studs aligned.

Frame heights as determined by specific design.

**Minimum Partition Width**

Space between Frames shall be a minimum of 25mm.

In order to achieve the STC ratings in the table above the partition width (excluding the board) shall be a minimum of 153mm. Increasing the partition width would increase STC performance as per the table below.

Stud Depth	Space Between Frames	Partition Width (Excludes Board)	STC Rating
90mm x 2	25mm Min	205mm	+0
90mm x 2	75mm Min	255mm	+2

**Wall Sound Absorber**

Install Sound Absorber between studs on one side of the double frame. Use 75mm thick R1.8 glass wool blanket.

**Plasterboard Lining**

Two layers of Elephant Plasterboard to One side of the double steel framing and Two layers to the Other Side as per specified system above.

Vertical fixing only permitted. Use full height sheets where possible. Inner layer joints on opposite side of frame should be offset. All sheet joints must be fixed over steel framing. Vertical joints of the outer layer should be offset by 600mm to those of the inner layer. Sheet end butt joints must be formed over nogs and offset the outer layer joints from the inner layer. The inner layers are fixed hard to the floor. Sheets shall be touch fitted.

**Fixing of Linings**

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

System Number	Side One		Side Two	
	1 <sup>st</sup> Layer	2 <sup>nd</sup> Layer	1 <sup>st</sup> Layer	2 <sup>nd</sup> Layer
	Self-Tapping Drywall Screws			
<b>E4SDLA45-S52</b>	13mm	13mm	13mm	13mm
	25 x 6g	41 x 6g	25 x 6g	41 x 6g
<b>E4SDLA45-M40</b>	10mm	10mm	10mm	10mm
	25 x 6g	41 x 6g	25 x 6g	41 x 6g

**Fastener Centres**

Inner Layer: Fix at 300mm centres up each stud with no fixings to top and bottom channel.

Outer Layer: Fix at 300mm centres up each stud with no fixing to top and bottom channel sections.

Place fasteners no closer than 12mm to sheet edge and 50mm from sheet ends.

Place fasteners at 200mm centres where sheet end butt joints occur.

Avoid outer layer screws from hitting inner layer screws.

**Acoustic Sealant**

A bead of acoustical sealant is required around the perimeter of the inner layer and the outer layer is bedded onto the bead. The perimeter junctions of the wall must be airtight.

**Jointing**

Inner Layer: Unstopped.

Outer Layer: All fastener heads stopped and all sheet joints reinforced and stopped. Wall to ceiling junctions are to be reinforced with paper tape and square stopped or finished with Cornice. All in accordance with Elephant Plasterboard Installation Guide.

