E4TDLA60 Double Timber Frame | Load Bearing | Two Way FRR

4 Layers: 2 Layers of Plasterboard to each side of frame | Full Intertenancy **A**coustic

System Number	Lining Suffix	Fire Rating	Load Bearing Ability	Noise Control		Lining Requirement
				STC	Rw	
E4TDLA60	-S46	60/60/60	LB	60	59	1 x 10mm Standard-Plus & 1 x 13mm Standard on One side 1 x 10mm Standard-Plus & 1 x 13mm Standard on Other side
	-MS40	60/60/60	LB	61	60	1 x 10mm MultiSmart & 1x10mm Standard-Plus on One side 1 x 10mm MultiSmart & 1x10mm Standard-Plus on Other side
	-S52	60/60/60	LB	62	61	2 x 13mm Elephant Standard on One side 2 x 13mm Elephant Standard to Other side
	-M40	60/60/60	LB	62	61	2 x 10mm Elephant MultiSmart on One side 2 x 10mm Elephant MultiSmart to Other side

Framing

Framing to comply with relevant sections and clauses of NZBC B1: Structure and NZBC B2: Durability.

Studs at 600mm centres maximum.

Nogs at 1350mm centre maximum.

Wall Height, Load and Framing Dimension

These are determined by NZS3604 stud tables for load bearing or non-load bearing partitions. Refer to Minimum Partition width.

Minimum Partition Width

In order to achieve the STC ratings in the table above the partition width (excluding the board) shall be a minimum of 205mm. 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 and nogs on one side of the double frame. Use 90mm thick R2.2 glass wool insulation.

Plasterboard Lining

Two layers of Elephant Plasterboard lining on one side of frame and Two layers on the other side of framing as per specified system above.

First layer or inner layer on each side of framing to be fixed vertically. Vertical or Horizontal fixing permitted on outer layer only. Use full height or full length sheets where possible. Inner layer joints on opposite side of frame should be offset. All sheet joints must be fixed over solid timber framing. Vertical Joints of the outer layer should be offset 600mm from those of the inner layer. Sheet end butt joints must be formed over nogs. Offset the outer layer joints from the inner layer. Sheets shall be touch fitted.

Fixing of Linings

Fasteners (As per Specified System Above)

System Number	Side One		Side Two	
	1st Layer	2nd Layer	1st Layer	2nd Layer
	High Thread Drywall Screws			
E4TDLA60-MS40 E4TDLA60-M40	10mm 41 x 6g	10mm 51 x 7g	10mm 41 x 6g	10mm 51 x 7g
E4TDLA60-S46	10mm 41 x 6g	13mm 51 x 7g	10mm 41 x 6g	13mm 51 x 7g
E4TDLA60-S52	13mm 41 x 6g	13mm 51 x 7g	13mm 41 x 6g	13mm 51 x 7g

Fastener Centres

Inner Layer: Fix at 600mm centres at sheet perimeter and all studs.

Outer Layer: Fix at 300mm centres at sheet perimeter and all studs.

Place fasteners 50mm from sheet corners along the top and bottom plates. On end studs place additional fasteners 50-60mm vertically and no close than 10mm from plate to stud connections.

Place fasteners minimum 12mm from sheet edges and 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 with paper jointing tape 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.