

**E2CSD60**

**Double Steel Frame-13mm MultiSmart Central liner Non Load Bearing Two Way FRR**

**2 Layers: 1 Layer of Plasterboard to each side of frame ( excludes Central liner)**

System Number	Lining Suffix	Fire Rating	Load Bearing Ability	Noise Control		Lining Requirement
				STC*	Rw	
<b>E2CSD60</b>	<b>-M26</b>	--/60/60	NLB	44	43	1 x 13mm MultiSmart on One side 1 x 13mm MultiSmart to Other side

\*To receive a higher STC of 53, fill the wall cavities between studs with 1 layer of 75mm thick R1.8 glass wool blanket on both frames.

**Framing**

Steel studs with minimum dimensions 64mm x 34mm x 0.55 BMT with 6mm return.

Tracks to be minimum size 64mm x 30mm x 0.55 BMT.

Top & bottom tracks are fixed to the floor and ceiling in true alignment. Studs are placed at 600mm centres maximum.

Place studs to allow the nominated expansion gap (minimum 15mm) at the top of frame. The studs are not directly fixed to the tracks. The studs are held in place by the grip of the track runners.

**Wall Height**

Recommended maximum height is 3.0m. For higher walls refer to steel stud height table below.

Stud Dimentions (mm)	Base Metal Thickness (mm)	Stud Centres (mm)	Max Wall Heights (mm)	Expansion Tolerance at top of studs (mm)
<b>64 x 34</b>	0.55	600	3000	15
		400	3100	15
<b>76 x 34</b>	0.55	600	3300	15
		400	3700	20*
	0.75	600	3600	20*
		400	4100	20*
<b>92 x 34</b>	0.55	600	3800	20*
		400	4200	20*
	0.75	600	4200	20*
		400	4800	25*

\* Use a minimum 50mm deep head track

**13mm MultiSmart Central liner**

Fix bottom and top tracks to floor and ceiling at 600mm centres and not more than 150mm from ends using steel fasteners. Install studs at 600mm centres max.

Install 13mm Elephant MultiSmart Central liner vertically at 300mm to one side using 25mm x 6g Self tapping drywall screws. Fasteners to be placed at 12mm from sheet edges and min 20mm clear of top and bottom tracks. Sheet joints to be formed over framing.

Second frame must be constructed against the 13mm Elephant MultiSmart Central liner with bottom and top tracks fixed to floor and ceiling. Install studs at 600mm centres max. Offset the second frame's studs by 300mm from the first frame.

Fix the 13mm Elephant MultiSmart Central liner to the second frame using 25mm x 6g Self tapping drywall screws at 300mm centres. Fasteners to be placed at 12mm from sheet edges and min 20mm clear of top and bottom tracks. Sheet joints to be formed over framing.

**Plasterboard Lining**

One layer of 13mm Elephant MultiSmart lining each side of the steel framing.

Vertical fixing only permitted. Use full height sheets where possible. The vertical sheet joints must be offset on the opposite side of the frame.

**Sheet end butt joints-** must be formed over framing and staggered. Offset joints from opposite side of the frame.

All sheet joints must be formed over framing.

The layers are fixed hard to the floor. Sheets shall be touch fitted.

**Fixing of Linings**

**Fasteners**

System Number	Single Layer
	Self Tapping Drywall Screws
<b>E2CSDA60-M26</b>	13mm
	25 x 6g

**Fastener Centres**

Fix at 300mm centres up each stud with no fixing to top and bottom track sections.

Place fasteners no closer than 12mm to the sheet edge and 50mm from sheet ends and min 20mm clear of top and bottom tracks.

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

Fasteners may be placed at 18mm from sheet ends along top and bottom tracks, provided the fasteners do not connect the stud to the track.

If floor deflections need to be considered, do not fix any linings to top track.

**Penetrations**

Penetrations in cavities are permitted on either side of the Central liner for plumbing and electrical services.

Minimum 10mm clearance must be allowed between plumbing or electrical services and Central Liner for back-to-back services and penetrations.

Fire stopping for penetrations are not required for Metal and PVC Plumbing services up to 65mm diameter. 6mm max clearance gap around the plumbing services are required for penetrations through plasterboard linings. Gaps to be filled with a flexible sealant.

Penetration of electrical services up to 90 x 50mm do not require to be fire-stopped. Flush boxes are limited to two per 600mm wide stud bay.

For larger penetrations and penetrations through 13mm Elephant MultiSmart Central Liner, suitable proprietary fire-stopping is required.

Penetrations through 13mm Elephant MultiSmart Central Liner may reduce the STC performance.

**Plasterboard lining for Wet Area**

If 13mm Elephant MultiSmart is replaced with 13mm Elephant AquaSmart, the FRR will be retained, but with a reduction in STC.

Refer to STC performance table on page 15.

**Jointing**

Central Liner: Unstopped

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



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