



Structural Stability

to BS 5234: Part 2: 1992

Summary of Performance

Document No. LS90 / STR1

Ls90 Elegance Partitioning System

Steel Faced Plasterboard Solid Panel Construction with 90° Corner & Doorset

This is to confirm that the construction of the above partitioning system with **steel faced plasterboard panels** as detailed in the Building Test Centre Reports No. **BTC 11846S** and **BTC 12721S** (available on request), Komfort's **Ls90 STR/INST.1** and **summarised overleaf** has been tested in accordance with British Standard 5234: Part 2: 1992 and satisfied the criteria for structural stability achieving grade;

Panels / Door	Test Annexes	Performance Grade Achieved
Steel Faced Plasterboard & Veneered Door	A, B, C, D, E	Severe Duty
	F (door slam)	see note (2)

For performance validation of the installed product this Summary of Performance must be accompanied by the signed Contractors Statement



Certificate No FM25967

National Specifier Support Line Tel: 0871 781 2700 ♦ E-mail: tech@komfort.com ♦ Internet: www.komfort.com

LS90/STR1 - 04/13

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Summary of Results



Test Report: **BTC 11846S**
BTC 12721S

Test Date: **01 February 2002**
26 March 2003

Test Height: **3000mm**
2800mm

grade compliance in accordance with BS 5234: Part 2: 1992										
Requirement of test	Test method Annex	Grade performance achieved (Pass / Fail)				Impact Energy	Load	Deflection (mm)		Damage
		Light duty	Medium duty	Heavy duty	Severe duty			Max	Residual	
Stiffness - Centre of panel - On stud	A	-	-	-	Pass	-	500N	9.2	0.6	None
	A	-	-	-	Pass	-	500N	7.0	0.2	None
Surface damage by a small hard body impact: (BTC 11846) (1)										
Straight partition	B	-	-	-	Tested	10Nm	-	-	-	None
Partition 90° junction	B	-	-	-	Tested	10Nm	-	-	-	None
Resistance to damage by a large soft body impact:										
Straight partition centre of panel	C	-	-	-	Pass	100Nm	-	-	0.3	None
Straight partition on stud	C	-	-	-	Pass	100Nm	-	-	0.5	None
Partition 90° junction (BTC11846)	C	-	-	-	Pass	100Nm	-	-	1.0	None
Perforation by small hard body impact (BTC 11846):										
Straight partition	D	-	-	-	Pass	30Nm	-	-	-	None
Partition 90° junction	D	-	-	-	Pass	30Nm	-	-	-	None
Resistance to structural damage by large soft body impact:										
Straight partition centre of panel	E	-	-	-	Pass	120Nm	-	-	-	None
Straight partition on stud	E	-	-	-	Pass	120Nm	-	-	-	None
Door slamming (2)	F	-	-	-	see note (2)	-	-	-	0.6	see note (2)
Crowd pressure	G						1,5kN/m	34.0	7.0	None
Lightweight pull out	K	not tested					-	-	-	-
Lightweight pull down	J	not tested					-	-	-	-
GRADE ACHIEVED	Severe Duty									
Tested Construction:	Erected in a straight run 4300mm long x 3000mm (BTC11846) and at 2800mm (BTC 12721) high with one fixed end and one free end. The test specimen included a doorset 838mm x 2650mm positioned 600mm from the fixed end, the door weight was 54.52kg (2). Each panel comprising of 12.5mm thick DSG plasterboard bonded to the inside of a 0.8mm steel facing that was hung either side of a 54mm vertical 2 part 1.2mm thick steel stud positioned at 1200mm centres. No infill was installed in the vertical gap between the panels or the stud cavity (BTC 12721). The door was hung in a 2 part aluminium door frame using one and a half pair of lift off steel hinges. Following the door test a 90° corner with 900mm long return was erected.									
<p>(1) As this is indicative (without pass or fail criteria) the term "tested" is shown against the appropriate level of performance. Sponsors and specifiers should ascertain if surface damage is acceptable.</p> <p>(2) Door weight was increased to meet the requirement under standard to 60kg to enable higher grade (severe) slam test to be conducted. After 100 slams the door leading edge was rubbing on the door frame, but it had been noted before the test that the vertical gap between the door leading edge and the frame was under size, therefore with the correct working gaps between the frame and the door it would have been fully operational.</p>										

The above data must be read in conjunction with the test summary description given overleaf.

The information given is an extract of the test reports supplied by The Building Test Centre, East Leake, Loughborough.

BTC is a UKAS approved Test Laboratory.



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Steel Faced Plasterboard Solid Panel Construction

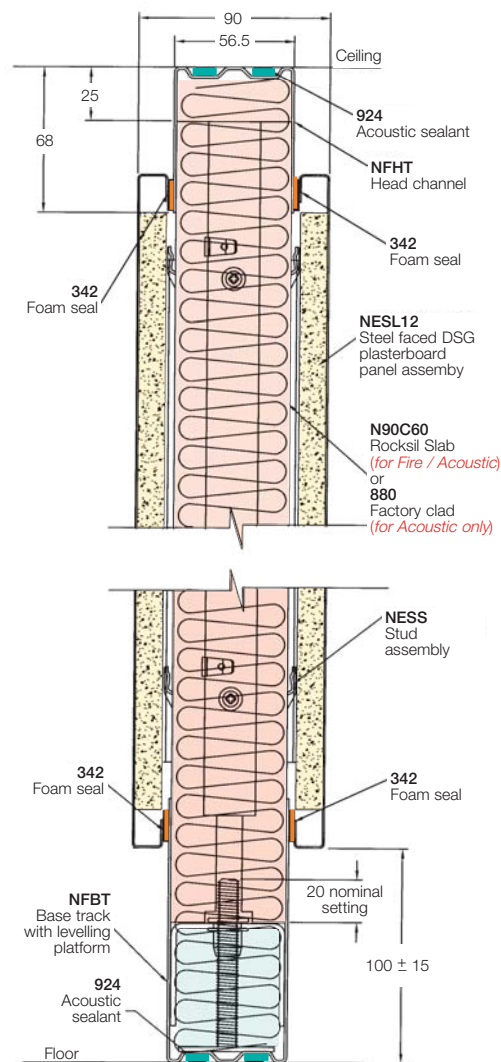


<p>Ls90 Solid Construction :</p>	<p>Steel Panel: The panels were made of 0.8mm thick mild steel facings with a 12.5mm thick DSG Plasterboard bonded to the inside. The panel assembly is hung either side on the 2 part steel vertical stud assembly (NESS) positioned at nominal 1200mm centres.</p> <p>Head: The head tack (NFHT) had 2 strips of acoustic sealant (924) applied before then screw fixing in position using No.8 x 38mm long screws at 600 centres.</p> <p>Base: Floor Track Assembly (NFBT) comprising of a floor channel had 2 strips of acoustic sealant (924) applied on the base and was then screw fixed in position using No.8 x 38mm long screws at 600 centres. The inner adjustable base section was then inserted.</p> <p>Abutments: Tolerance Wall Abutment Assembly (NJWT). The back of inner channel was applied with acoustic sealant (924) then screw fixed using No.8 x 38mm long screws at 600 centres direct to the test rig aperture and the outer section is assembled direct to the wall channel with vertical stud.</p> <p>Vertical Studs: Are nominal 54mm wide 2 part 1.2mm thick mild steel assembled together and infilled with 45kg/m³ Rockwool.</p> <p>Vertical Panel Joint: PVC^u Infill Gasket (NEJI)</p>
<p>Cavity Infill :</p>	<p>Acoustic / Fire performance: 62mm thick 45kg/m³ Rocksil Slab (N90C60).</p> <p>Acoustic only performance: 60mm thick Factory Clad (880).</p>

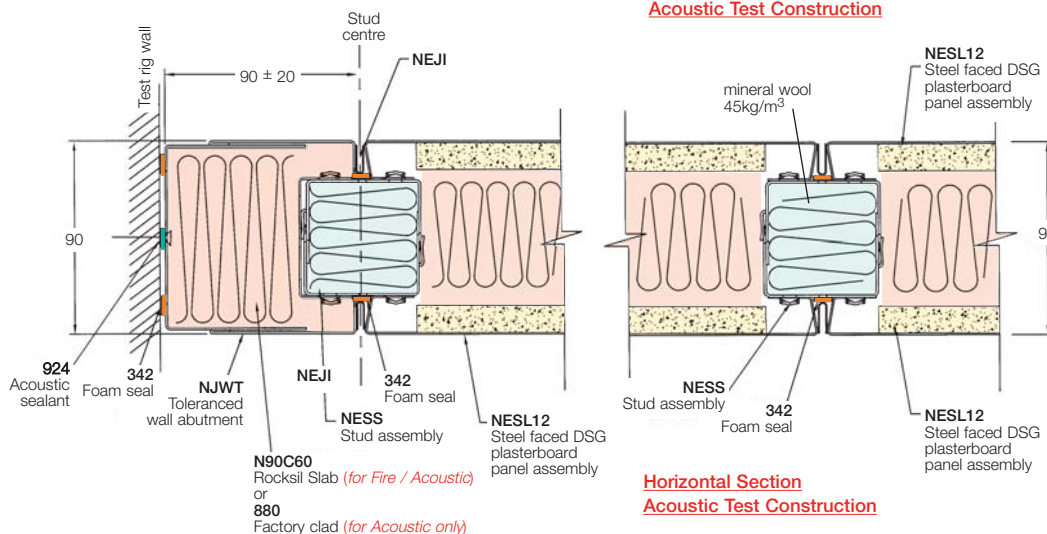
Notes:
This data sheet should be read in conjunction with Structural Summary of Performance Ls90 / STR1.

The tested construction other than the vertical stud did not include any cavity infill, seals or intumescent that would be required for acoustic and fire performance.

For details of the additional components required for acoustic and or fire performance applications see the Sound Reduction and Fire Resistance Summary of Performance data sheets.



**Vertical Section
Acoustic Test Construction**



**Horizontal Section
Acoustic Test Construction**

