



# Structural Stability

to BS 5234: Part 2: 1992

## Summary of Performance

Document No. LS90 / STR3

### Ls90 Elegance Partitioning System Pre-Vinyled Plasterboard Solid Panel Construction with 90° Corner & Doorset

This is to confirm that the construction of the above partitioning system with **pre-vinyled plasterboard panels** as detailed in the Building Test Centre Reports No. **BTC 12470S** and **BTC 12720S** (available on request), Komfort's data sheet **Ls90 STR/INST.3** 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
Pre-Vinyled Plasterboard & Veneered Door	A, B, C, D, E	<b>Medium Duty</b>
	F (door slam)	<b>see note (2)</b>

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/STR3 - 04/13

# Ls90 Reflections Partitioning System

## Pre-Vinylated Plasterboard Solid Panel Construction

### with 90° Corner & Doorset

### Summary of Results



Test Report: **BTC 12470S**  
**BTC 12720S**

Test Date: **12 December 2002**  
**17 April 2003**

Test Height: **2700mm**  
**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	
<b>Stiffness</b> - Centre of panel - On stud	A	-	Pass	-	-	-	500N	12.7	2.1	None
	A	-	-	Pass	-	-	500N	11.1	0.6	None
<b>Surface damage by a small hard body impact: (BTC 12470): (1)</b> Straight partition Partition 90° junction	B	-	Tested	-	-	3Nm	-	-	-	] Slight indent
	B	-	Tested	-	-	3Nm	-	-	-	
<b>Resistance to damage by a large soft body impact:</b> Straight partition centre of panel Straight partition on stud Partition 90° junction (BTC12470)	C	-	-	Pass	-	40Nm	-	-	0.3	None
	C	-	-	Pass	-	40Nm	-	-	0.5	None
	C	-	-	Pass	-	40Nm	-	-	1.0	None
<b>Perforation by small hard body impact (BTC 11846):</b> Straight partition Partition 90° junction	D	-	Pass	-	-	30Nm	-	-	-	None
	D	-	Pass	-	-	30Nm	-	-	-	None
<b>Resistance to structural damage by large soft body impact:</b> Straight partition centre of panel Straight partition on stud	E	-	-	-	Pass	120Nm	-	-	-	None
	E	-	-	-	Pass	120Nm	-	-	-	None
<b>Door slamming (2)</b>	F	-	-	-	see note (2)	-	-	-	0.2	see note (2)
<b>Crowd pressure</b>	G						1,5kN/m	36.2	7.6	None
<b>Lightweight pull out</b>	K	not tested					-	-	-	-
<b>Lightweight pull down</b>	J	not tested					-	-	-	-
<b>GRADE ACHIEVED</b>	<b>Medium Duty</b>									
<b>Tested Construction:</b>	Erected in a straight run 4300mm long x 2700mm (BTC12470) and at 2800mm (BTC 12720) 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 <sup>(2)</sup> . Each panel comprising of 12.5mm thick pre-vinylated DSG bevelled edge plasterboard gravity hung using panel clips (M05) onto transoms positioned at 1200mm vertical centres either side of a 54mm vertical 2 part 1.2mm thick steel stud positioned at 1200mm centres. There was no cavity infill installed within the stud cavity (BTC 12720). The door was hung in a 2 part aluminium door frame using one and a half pair of lift off steel hinges. 90° corner had been previously tested (BTC12470).									
<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 movement within the frame was fully operational, however the hung panels although correctly retained had moved laterally towards the free end of the construction as no capping or abutment sections had been installed that would have prevented the movement.</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.



# Ls90 Elegance Partitioning System

## Pre-Vinyled Plasterboard Solid Panel Construction

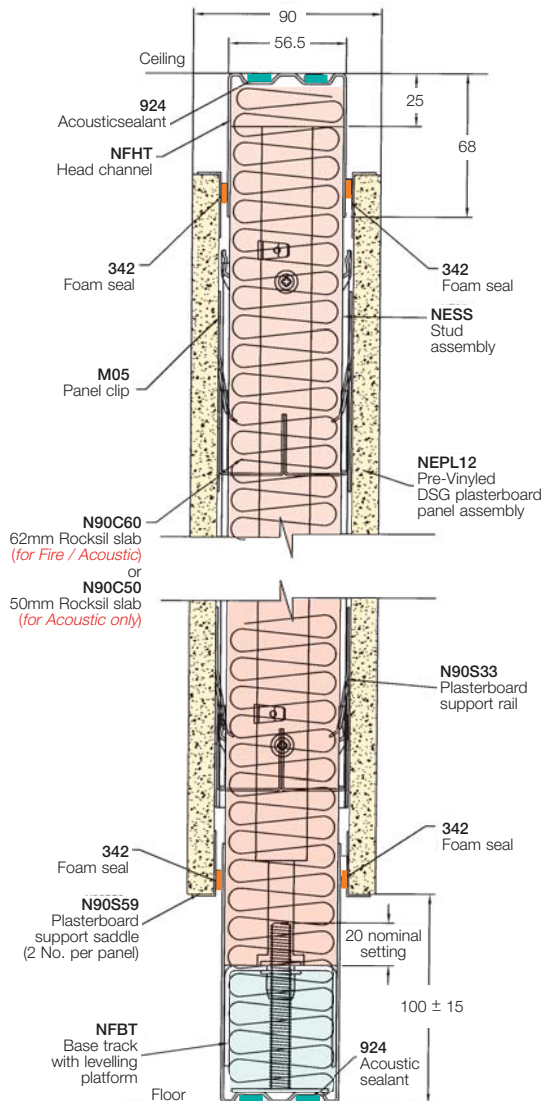


<p>Ls90 Solid Construction :</p>	<p><b>Plasterboard Panel:</b> The panels are made from 12.5mm thick bevelled edge plasterboard that has a pre-vinyled facing. The panel is fitted on the inside with panel clip (M05) that enables the assembly to be gravity hung on the plasterboard support rails (N90S33) installed between the 2 part steel vertical stud assembly (NESS) positioned at nominal 1200mm centres.</p> <p><b>Head:</b> 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><b>Base:</b> 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><b>Abutments:</b> 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><b>Vertical Studs:</b> Are nominal 54mm wide 2 part 1.2mm thick mild steel assembled together and infilled with 45kg/m<sup>3</sup> Rockwool.</p> <p><b>Vertical Panel Joint:</b> PVC<sup>u</sup> Infill Gasket (NEJL)</p>
<p>Cavity Infill :</p>	<p><b>Acoustic / Fire performance:</b> 62mm thick 45kg/m<sup>3</sup> Rocksil Slab (N90C60).</p> <p><b>Acoustic only performance:</b> 50mm thick 45kg/m<sup>3</sup> Rocksil Slab (N90C50).</p>

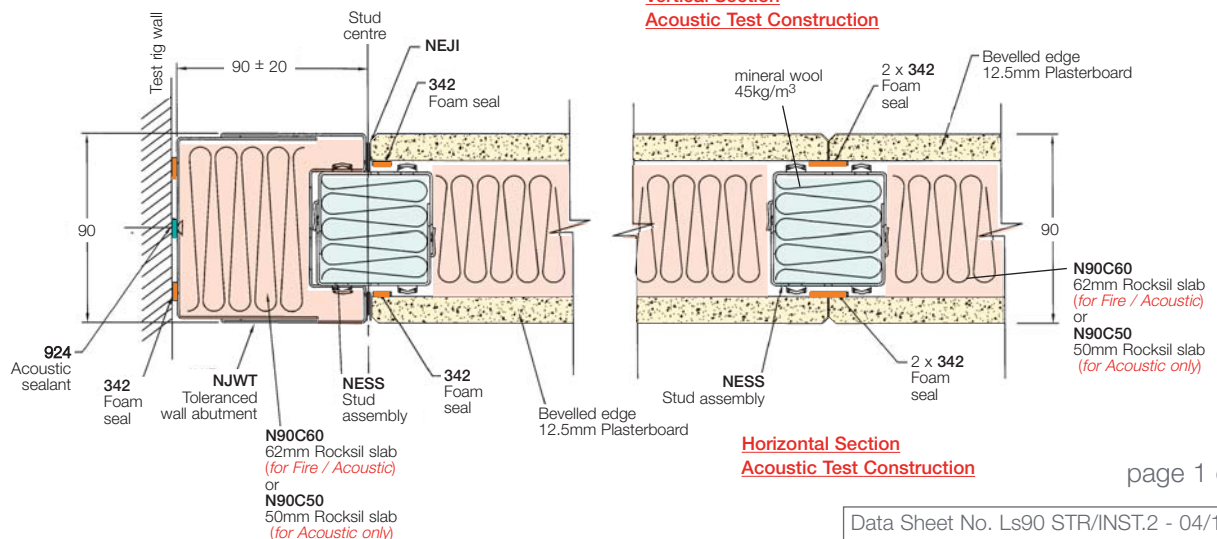
**Notes:**  
This data sheet should be read in conjunction with Structural Summary of Performance Ls90 / STR3.

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**

