



Polar Vision

Structural Stability to BS 5234: Part 2: 1992
BS 6180: 1999 / BS 6399-1: 1996

Summary of Performance

Document No. PO / STR10

Polar Double Glazed Partitioning System with Two Part Dry Joint and without Ghost Post Mullion

This is to confirm that the double glazed construction of the above partitioning system using **12mm thick toughened safety glass and 12.4mm thick Komfort intumescent fire safety glass** as detailed in the Building Test Centre Report No. **BTC 14497S** (available on request) and **summarised overleaf** has been tested in accordance with British Standard 5234: Part 2: 1992 and satisfied the criteria for structural stability and achieve grade;

Test Annexes	Type of Test	BS 5234 Performance Grade
A	stiffness	Heavy Duty
E	impact	Severe Duty

Pressure Tests BS 5234 - BS 6180 - BS 6399-1			
Test Description	Deflections (mm)		Test Pressure
	Maximum	Residual	
Crowd Pressure	39.24	0.86	1.5kN/m

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



Certificate No FM25967

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POLAR VISION Partitioning System

Double glazed construction using 12.4mm Intumescent fire safety glass and 12mm toughened with 2 part dry joint without ghost post mullion

Summary of Results



Test Report: **BTC 14497S**

Test Date: 5 - 7 April 2006

Test Height: **2995mm**

Summary of tests for grade compliance in accordance with BS 5234: Part 2: 1992										
Requirement of test (4)	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: Middle of 12mm glass panel 12mm glass to glass dry joint	A	-	-	-	Pass	-	500N	8.20	0.15 ⁽¹⁾	None
	A	-	-	Pass	-	-	500N	11.06	0.18 ⁽¹⁾⁽²⁾	None
Surface damage by a small hard body impact (500mm high): Middle of 12mm glass panel 12mm glass to glass dry joint	B	-	-	-	not tested	10Nm	-	-	-	-
	B	-	-	-	not tested	10Nm	-	-	-	-
Resistance to damage by a large soft body impact:	C	-	-	-	see Annex E as greater impact req'd	100Nm	-	-	-	-
Perforation by small hard body impact: Straight glass partition	D	-	-	-	Perforation not applicable for glass	30Nm	-	-	-	-
Resistance to structural damage by large soft body: Middle of 12mm glass panel 12mm glass to glass dry joint	E	-	-	-	Pass	120Nm	-	-	-	None
	E	-	-	-	Pass	120Nm	-	-	-	None
Door slamming	F	-	-	-	not included	-	-	-	-	-
Crowd Pressure	G						1.5kN/m	39.24	0.86 ⁽³⁾	None
Light & Heavyweight Anchorage	J & K	not applicable for glazed partition					-	-	-	-
GRADE ACHIEVED	HEAVY DUTY (for all the tests applicable within the standard for a fully glazed partition)									
Test Construction:	The specimen was constructed in a straight run of 4800mm long to a height of 2995mm with one fixed end and one free end. A total double glazed glass area of 14.4m ² was installed with 12.4mm Komfort intumescent fire safety glass on one side and 12mm thick toughened glass on the other side (there were no ghost posts installed) with the vertical edges of the glass panes connected to the post using clear PVC ^U two part dry joint (SJ31 / SJ32). The top of the glass was fitted at the head and abutment into double glazed head channels (821 / DGP1) that was installed non fire side of the head channel with the glazing gasket (SJ13) and intumescent gaskets (SJG1 / SJG2) and at the base in to the glazing base track / bead (DGP4 and SJ3) with the 12mm glass held in place using gaskets (DGP11 and SJ12) and the fire glass held using intumescent gasket (SGJ1 / SJG2).									
(1) Residual measurements were taken after 5 minutes of the pressure being released. (2) Under the standard the maximum deflection for Severe Duty is 10mm with a residual no greater than 1mm. (3) Residual measurements were taken after 10 minutes of the pressure being released. (4) Testing was carried out on what is considered to be the weaker side that is also the internal office side of the structure.										

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.



POLAR VISION partitioning system

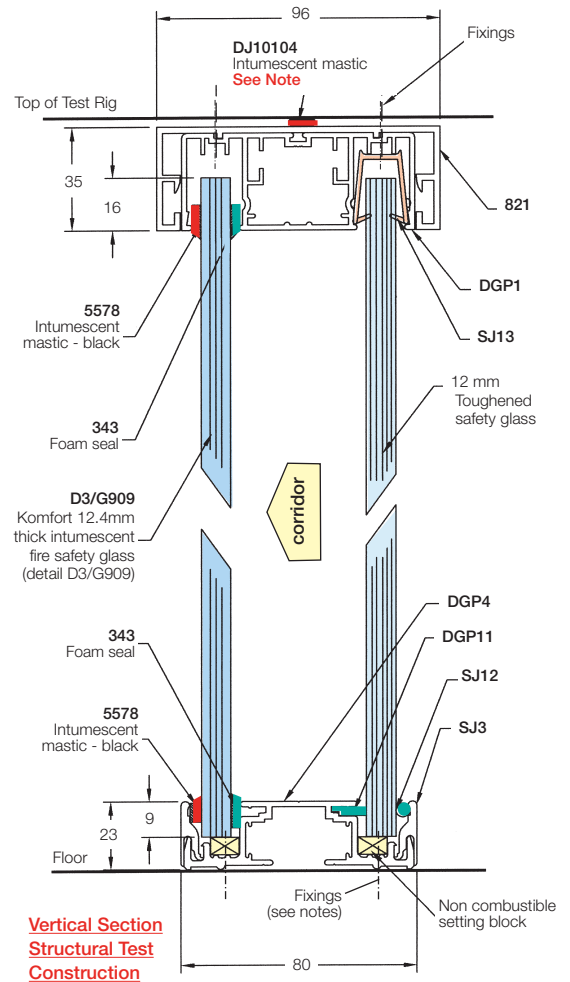
Installation Instructions for

Double glazed construction using 12.4mm Intumescent fire safety glass and 12mm toughened with 2 part dry joint without ghost post mullion



<p>Double Glazed Corridor side: 12.4mm thick Komfort Intumescent Fire Safety Glass Office side: 12mm thick Toughened Safety Glass</p>
<p>Maximum Construction Height: 2995mm</p>

<p>Polar Double Glazed Construction :</p>	<p>Head: The Komfire-75 head channel (821) was fitted internally with the inner double glazed head channel (DGP1) containing the glazing channel gasket (SJ13) insert to hold glass in position on the 12mm side with foam seal (343) and intumescent mastic (5578) used on the 12.4mm fire glass (corridor) side only.</p> <p>Base: Two part base channel (DGP4 and SJ3) with 12.4mm thick glass held in place using foam seal (343) and intumescent mastic (5578) and neutral colour PVC^U glazing beads (DGP11 & SJ12) on the 12mm thick glass side.</p> <p>Abutments: Installed to the same detail as the head.</p> <p>Vertical Joint: Two part dry joint (SJ31 / SJ32).</p>
<p>Glass :</p>	<p>12.4mm thick Komfort Intumescent Fire Glass & 12mm thick Toughened (class 'A') Safety Glass.</p>
<p>Glass Area :</p>	<p>Total of 4 No. panes of each glass 1194mm wide x 2967mm high (14.17m²) were installed.</p>



Notes:
 Intumescent sealant (DJ10104) was not used on the test construction in the test rig aperture.

The construction height given is guidance for internal office construction subject to design layout requirement. Long continuous straight runs without dividing walls will effect the construction height limits.

