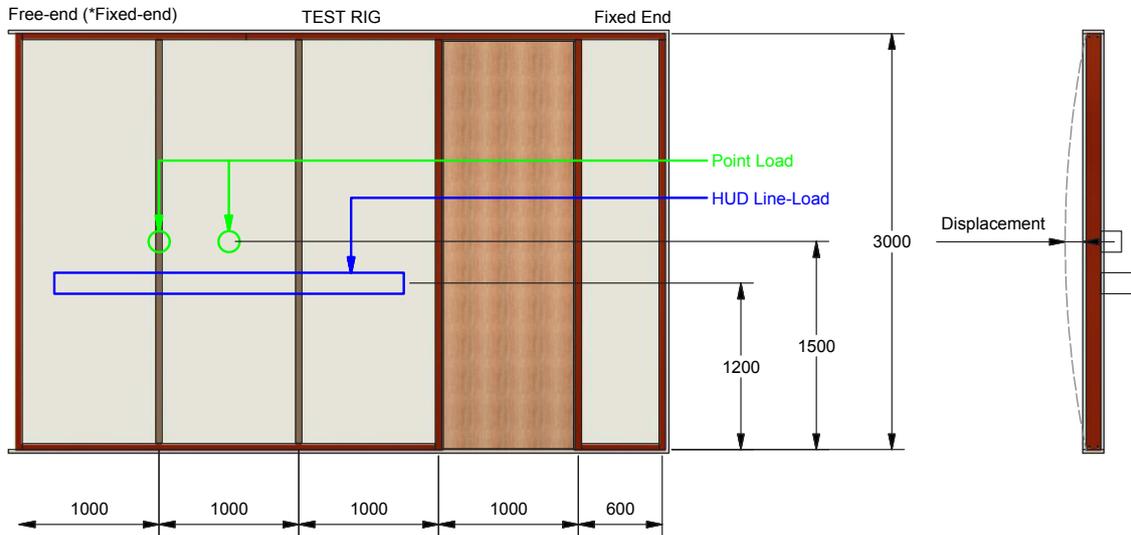


FORZA IMOLA PARTITION SYSTEM

CAD FINITE ELEMENT ANALYSIS SIMULATION OF BS5234 ANNEX A AND ANNEX G

Specimen Rear Elevation and Deflection

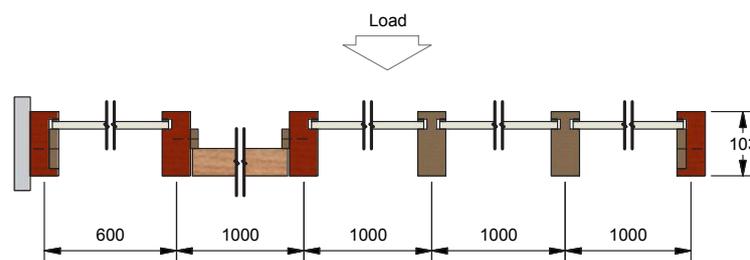


Test	Test Annex BS 5234-2	Applied Load	CAD FEA Imola Simulation Maximum Displacement	Forza Timber Frame Test BTC180575 Max Deflection
Determination of partition stiffness	A	500 N between mullions (free-end)	4.8mm	3.55 mm
		500 N across mullion (free-end)	6.8mm	5.09 mm
Point Load partition stiffness	A _(ad-hoc)	1500 N between mullions (free-end)	12.5mm	10.91 mm
		1500 N between mullions (fixed-end*)	10.5mm	..
Determination of resistance to crowd pressure	G	3750 N across mullion (free-end)	21.8mm	21.11mm
		3750 N across mullion (fixed-end*)	20.8mm	..

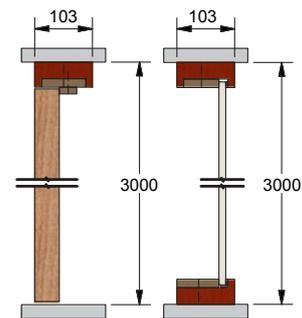
Comparison: *Fixed-end result is an extra reference only, not the standard Annex A or G test.

Details

Mullion



Head and Base



Test Materials

- Glass - 12mm Toughened Glass
- Glazing Gasket - Flexible Plastic Gasket
- Frame - 103 x 45mm Medium Density Fibre-board MDF
- Bead - Medium Density Fibre-board MDF
- Door - (n/a)
- Hinge - (n/a)
- Frame fixings - No.10 x 75mm Timber Screws
- Bead fixings - 40mm pins
- Hinge fixings - (n/a)

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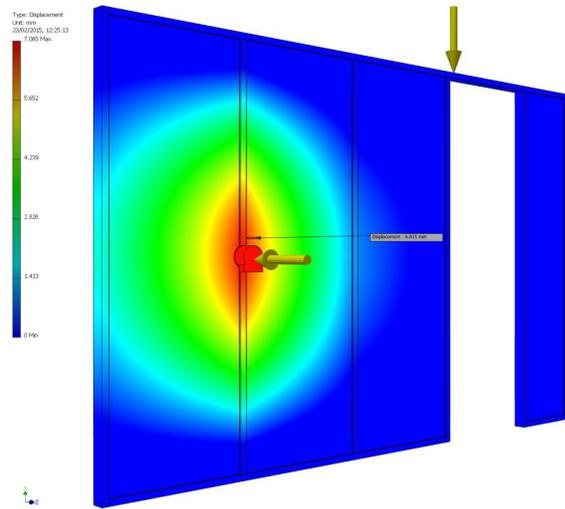


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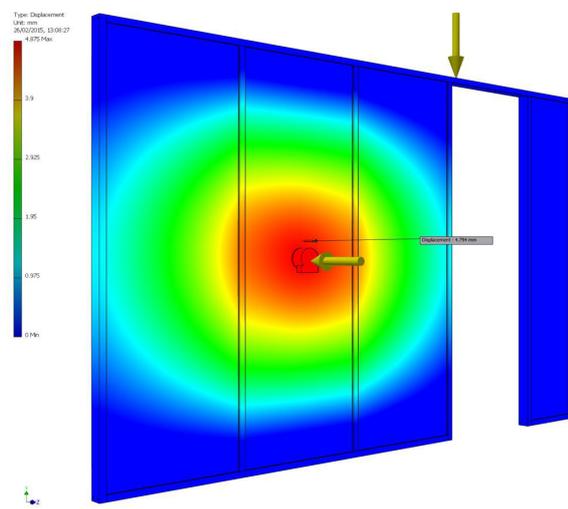
FORZA IMOLA PARTITION SYSTEM

CAD FINITE ELEMENT ANALYSIS SIMULATION OF BS5234 ANNEX A AND ANNEX G

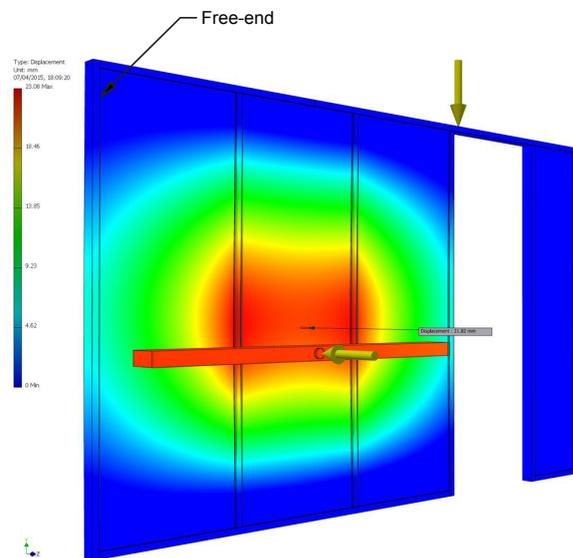
Point Load applied to part of the mullion (kN)
Result displacement = 6.8mm - Imposed Load 500 N



Point Load applied to part of the infill (kN)
Result displacement = 4.8mm - Imposed Load 500 N

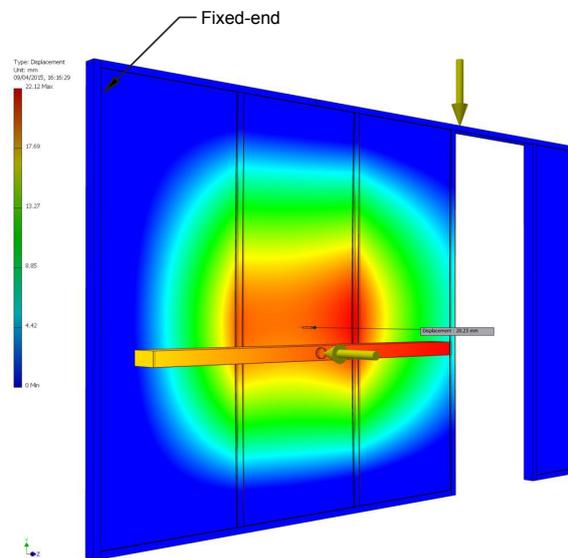


Horizontal Uniformly Distributed Line-load (kN/m)(3750N)
Result displacement = 21.8mm - Imposed Load 1.5 kN/m



Note: for 1.5 kN/m increase the mullion fixings at base from 2 to 4.

Horizontal Uniformly Distributed Line-load (kN/m)(3750N)
Result displacement = 20.2mm - Imposed Load 1.5 kN/m



Note: for 1.5 kN/m increase the mullion fixings at base from 2 to 4.

Note: These tests are simulated using Autodesk Inventor 2015 Finite Element Analysis. The results are indicative, Autodesk do not guarantee the results.

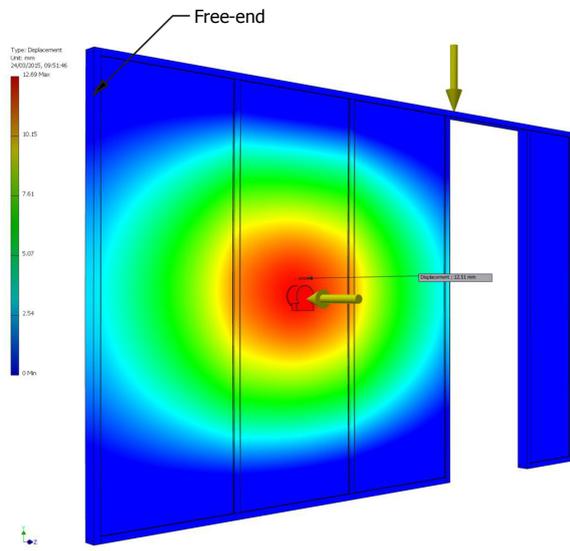
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FORZA IMOLA PARTITION SYSTEM

CAD FINITE ELEMENT ANALYSIS SIMULATION

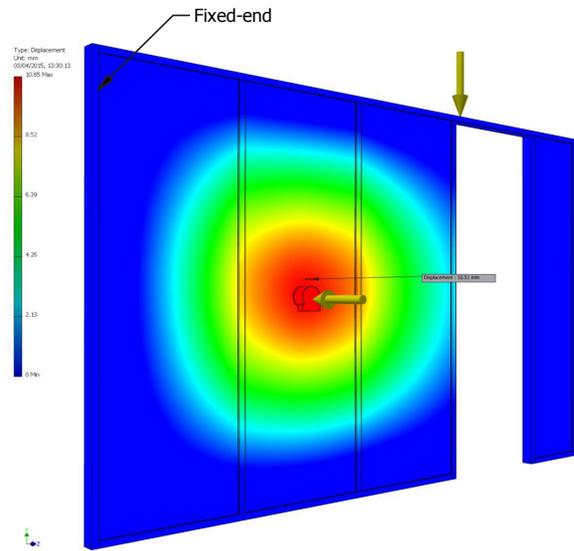
OF BS5234 ANNEX A AND ANNEX G

Point Load applied to part of the infill (kN)
 Result displacement = 12.5mm - Imposed Load 1.5 kN/m



Note: for 1.5 kN/m increase the mullion fixings at base from 2 to 4.

Point Load applied to part of the infill (kN)
 Result displacement = 10.5mm - Imposed Load 1.5 kN/m



Note: for 1.5 kN/m increase the mullion fixings at base from 2 to 4.

Note: These tests are simulated using Autodesk Inventor 2015 Finite Element Analysis.
 The results are indicative, Autodesk do not guarantee the results.

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