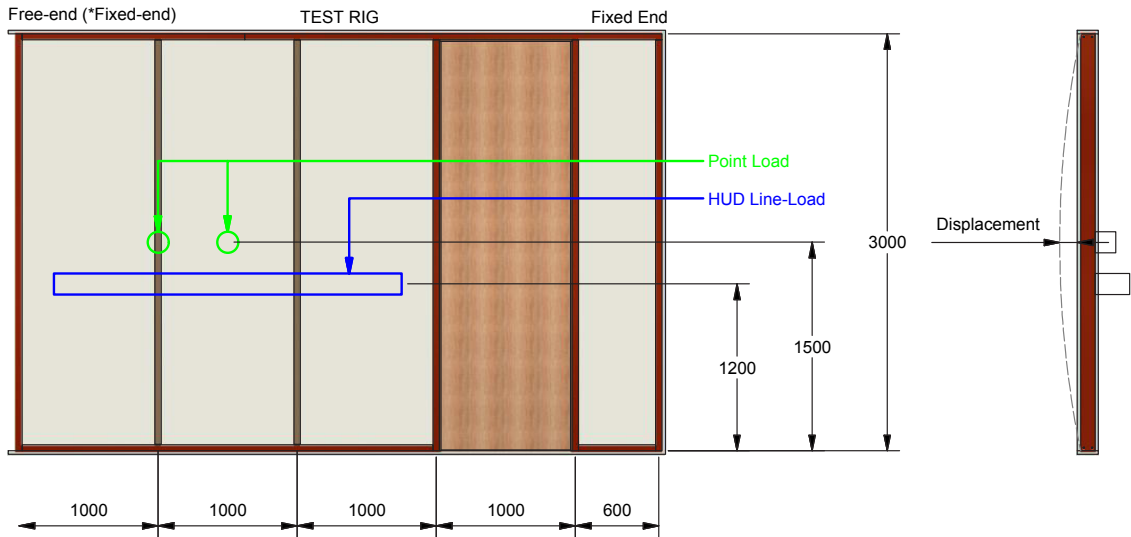


# FORZA IMOLA PARTITION SYSTEM

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

Specimen Rear Elevation and Deflection

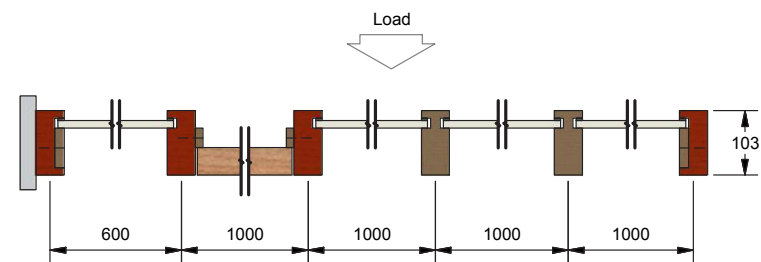


Test	Test Annex BS 5234-2	Applied Load	CAD FEA Imola Simulation Maximum Displacement	Forza Timber Frame Test BTC180575 Max Deflection
Determination of partition stiffness	A	500 N between mullions (free-end)	4.8mm	3.55 mm
		500 N across mullion (free-end)	6.8mm	5.09 mm
Point Load partition stiffness	A <sub>(ad-hoc)</sub>	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	..

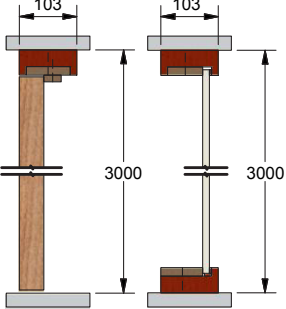
Comparison: \*Fixed-end result is an extra reference only, not the standard Annex A or G test.

### Details

#### Mullion



#### Head and Base



### Test Materials

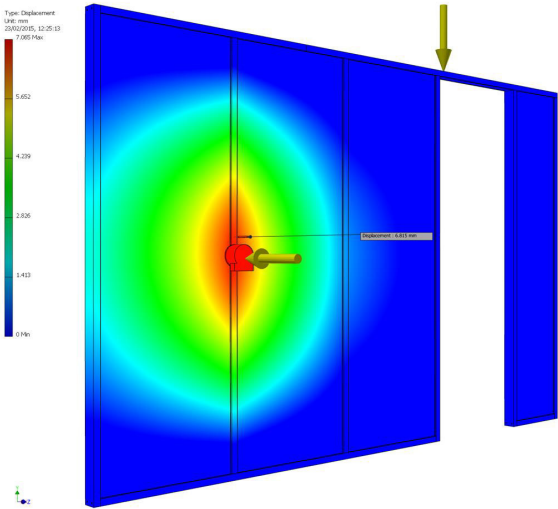
Glass - 12mm Toughened Glass  
Glazing Gasket - Flexible Plastic Gasket  
Frame - 103 x 45mm Medium Density Fibre-board MDF  
Bead - Medium Density Fibre-board MDF  
Door - (n/a)  
Hinge - (n/a)  
Frame fixings - No.10 x 75mm Timber Screws  
Bead fixings - 40mm pins  
Hinge fixings - (n/a)

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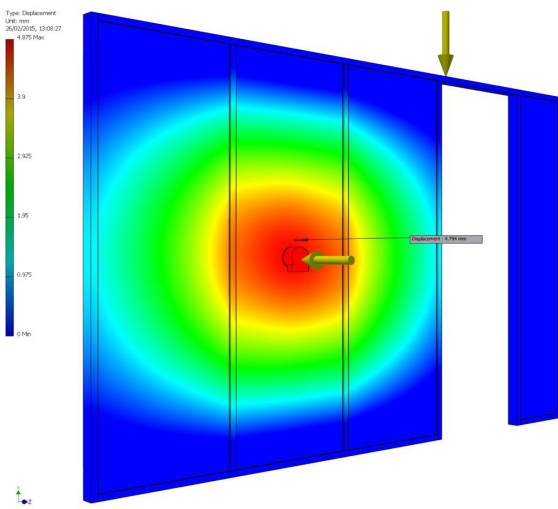
# FORZA IMOLA PARTITION SYSTEM

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

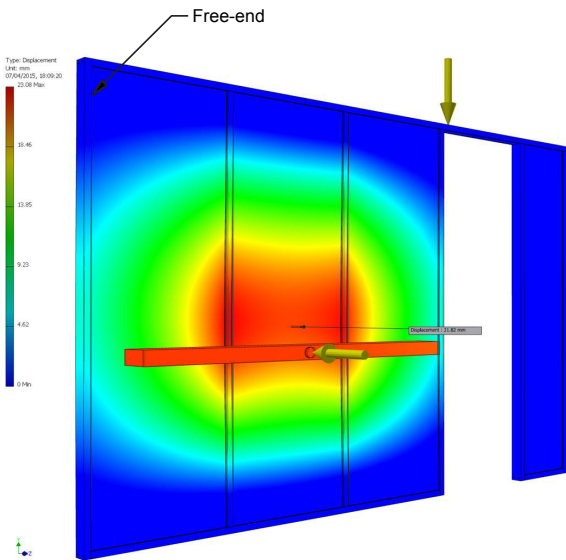
Point Load applied to part of the mullion (kN)  
Result displacement = 6.8mm - Imposed Load 500 N



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

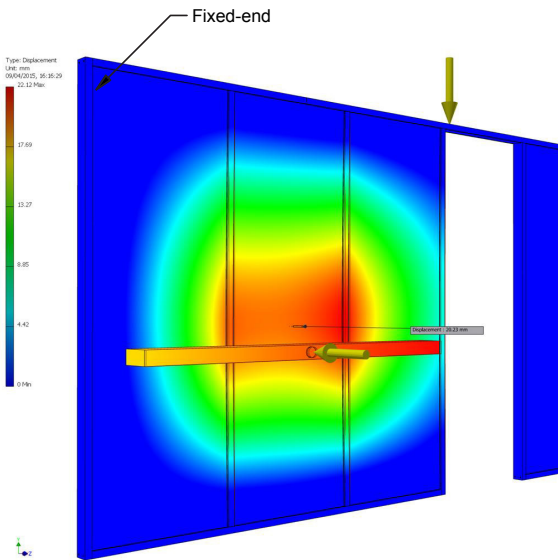


Horizontal Uniformly Distributed Line-load (kN/m)(3750N)  
Result displacement = 21.8mm - Imposed Load 1.5 kN/m



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.

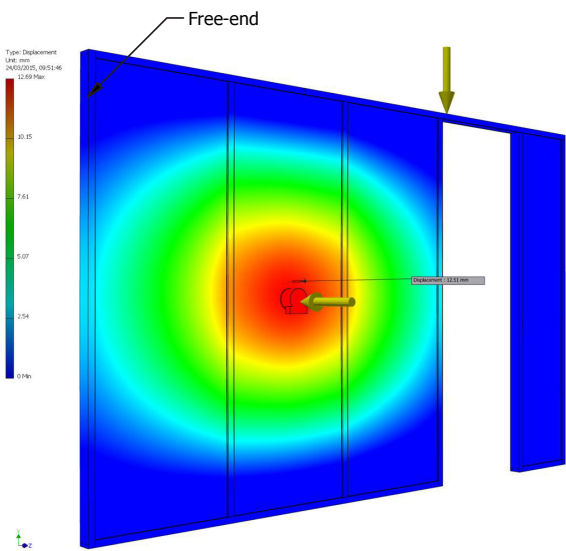
Title	CAD FEA BS5234 Simulation to Forza Imola Partition System		
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# FORZA IMOLA PARTITION SYSTEM

## CAD FINITE ELEMENT ANALYSIS SIMULATION

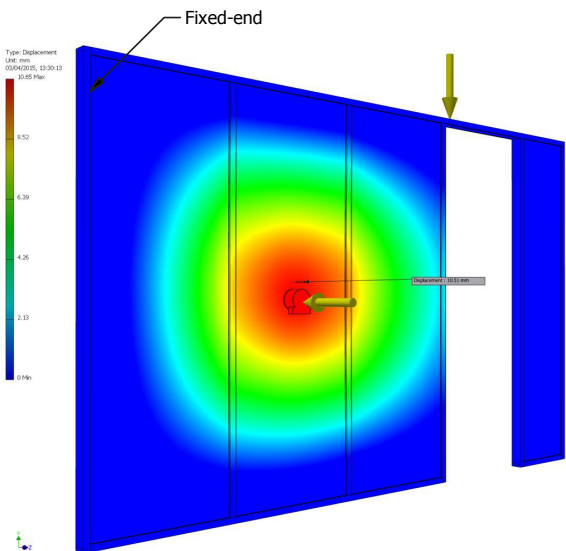
### OF BS5234 ANNEX A AND ANNEX G

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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