

# POLAR partitioning system

## Structural / Mechanical Performance Summary



### Structural Performance

The following information is a summary of tests carried out in accordance with BS 5234 for the measurements for strength and robustness including crowd pressure and door slam

Construction / Combination	Partition Construction Height (mm)	Performance	Performance Summary
<b>Single Glazed</b>			
- 10mm Toughened - dry joint	2700	Heavy <sup>(1)</sup>	PO / STR2
- 10mm Toughened - bubble joint	2700	Heavy <sup>(1)</sup>	PO / STR9
- 12mm Toughened - dry joint	3000	Severe <sup>(1)</sup>	PO / STR1
- 12mm Toughened - bubble joint	3000	Severe <sup>(1)</sup>	PO / STR8
- 12.4mm Komfort intumescent fire glass - dry joint	2700	Heavy <sup>(1)</sup>	PO / STR6
<b>Single Glazed with Deflection Head</b>			
- 12mm Toughened - 2 part 15mm deflection head - bubble joint	3000		PO / STR11
- 12mm Toughened - 2 part 25mm deflection head - bubble joint	3000		PO / STR12
- 12mm Toughened - 3 part 25mm deflection head - bubble joint	3000		PO / STR13
<b>Double Glazed</b>			
- 6mm Toughened / 10mm Toughened, dry joint & ghost post	3000	Severe <sup>(1)</sup>	PO / STR3
- 12.8mm Acoustic / 10mm Toughened, dry joint & ghost post	3000	Severe <sup>(1)</sup>	PO / STR7
<b>Polar Vision</b> - 12.4mm Komfort Intum. / 10mm Toughened, dry joint without ghost post	2700	Heavy <sup>(1)</sup>	PO / STR5
<b>Polar Vision</b> - 12.4mm Komfort Intum. / 12mm Toughened, dry joint without ghost post	3000	Heavy <sup>(1)</sup>	PO / STR10
<b>Double Glazed with Deflection Head</b>			
<b>Polar Vision</b> - 12.8mm Acoustic / 12mm Toughened - dry joint without ghost post - 3 part 25mm deflec hd.	3000	Heavy <sup>(1)</sup>	PO / STR14
<b>PolarTec</b> - 12.4mm Komfort Intum. / 10mm Toughened - dry joint, ghost post & 821 deflec. head ❖	3000	Severe <sup>(1)</sup>	PO / STR4

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## Structural / Mechanical Performance Summary



### Doorset Mechanical Performance

The following information is a summary of tests carried out in accordance with BS EN 947, BS EN 949 BS 7352 and DIN 18263 for the measurements of Vertical load, Soft heavy body impact and Hinge endurance

Frameless Glass doorset - aluminium door frame			
- Halo single glazed <b>SJ5</b> door frame with 2040 high glass door & glazed overpanel	- <b>V590</b> Patch Hinges - Vertical load applied to door opened 90 degrees (BS EN 947)	Severe	<b>PO / EVI-1</b>
	- Soft heavy body impact to closed door (BS EN 949)	Severe	<b>PO / EVI-1</b>
	- Hinge endurance - 500,000 cycles	DIN 18263	<b>PO / EVI-1</b>
- Halo single glazed <b>SJ5</b> door frame with 2613 full height glass door	- <b>V590</b> Patch Hinges - Vertical load applied to door opened 90 degrees (BS EN 947)	Severe	<b>PO / EVI-1</b>
	- Soft heavy body impact to closed door (BS EN 949)	Severe	<b>PO / EVI-1</b>
	- Hinge endurance - 500,000 cycles	DIN 18263	<b>PO / EVI-1</b>
- Single glazed <b>SJ35</b> door frame with 2400 high glass door & glazed overpanel	- <b>V505</b> Patch Hinges - Vertical load applied to door opened 90 degrees (BS EN 947)	Severe	<b>PO / EVI-5</b>
	- Soft heavy body impact to closed door (BS EN 949)	Severe	<b>PO / EVI-5</b>
	- Hinge endurance - 500,000 cycles	Grade 9	<b>PO / EVI-5</b>
Timber doorset - aluminium door frame			
- Single glazed <b>SJ35</b> door frame with 2405 high door & glazed overpanel	- <b>582</b> Lift-off Hinges - Vertical load applied to door opened 90 degrees (BS EN 947)	Severe	<b>PO / EVI-3</b>
	- Soft heavy body impact to closed door (BS EN 949)	Severe	<b>PO / EVI-3</b>
	- Hinge endurance - 604,000 cycles (BS 7352)	Grade 9	<b>PO / EVI-3</b>
- <b>PolarTec</b> Double glazed <b>DGP25 / DGP26</b> door frame with 2040 high door	- <b>582</b> Lift-off Hinges - Vertical load applied to door opened 90 deg. (BS EN 947)	Severe	<b>PO / EVI-4</b>
	- Soft heavy body impact to closed door (BS EN 949)	Severe	<b>PO / EVI-4</b>
	- Hinge endurance - 604,000 cycles (BS 7352)	Grade 9	<b>PO / EVI-4</b>
Frameless Glass doorset - No door frame			
- <b>PT10/20</b> Patch Fittings with <b>G930</b> Floor Spring - Vertical load applied to door opened 90 degrees (BS EN 947)		Severe	<b>PO / EVI-2</b>
- <b>K10/20</b> Patch Fittings with <b>G930</b> Floor Spring - Vertical load applied to door opened 90 degrees (BS EN 947)		Severe	<b>PO / EVI-2</b>

(1) Performance rating stated applies to test results applicable within the standard for a fully glazed partition.

❖ PolarTec 821 deflection head is also available with a plus 0 minus 25 or plus/minus 25mm.

The Performance Summary colour indicated the following:

■ = Data issued    ■ = Data available, to be issued    ✗ = Data not available,

