

## Setting and location blocks

Before placing the glazing pane in the surround, where necessary push setting blocks into position (where applicable, in the glazing compound) on the rebate platform. With the exception of panes of area not exceeding 0,3 m<sup>2</sup>, rest the glazing pane on setting blocks to centralize it within the surround. Use blocks of length 25 mm to 75 mm, except at the bottom bar of vertically pivoted windows, where a single block of length at least 150 mm is sufficient. Use location block also in openable windows to prevent distortion of the frame. Position setting and location blocks for glazing as shown in Figure 8. Setting and location blocks should be of a material that is compatible with the glazing materials and sealants used and should be of hardness 500° to 90° Shore A durometer.

**Notes:** Timber and masonry setting blocks are unacceptable as they are not compatible with glazing material. They are not of suitable shore hardness, they rot and are eaten by insects!

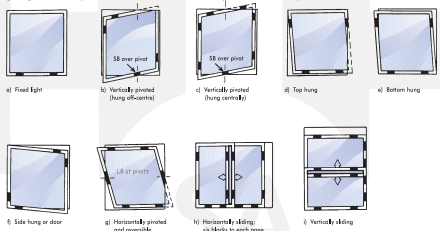


Figure 8 - Approximate positions of setting blocks and location blocks

## Balustrades

The following are AAAMSA/SAGGA recommendations for the application of safety glazing materials in balustrading. It is mandatory that any balustrade design is confirmed through testing, or is structurally designed by a competent person, structural engineer having the appropriate Professional Indemnity Insurance for compliance with the structural requirements of SANS 10160.

A balustrade guarding the edge of any balcony, bridge, flat roof or similar place more than 1m above the adjacent ground or floor level shall not be less than 1m in height and shall not have any opening that permits the passage of a 100mm diameter ball. These requirements also apply to any interior balcony or any mezzanine floor (SANS 10400 - Part D).

Balustrading guarding a swimming pool or swimming bath shall not be less than 1,2m high measured from the ground level, and shall not contain any opening which will permit the passage of a 100mm diameter ball (SANS 10400 - Part D).

## South African Glass Institute



Any deviation from tables 1 to 7 shall be approved in writing by a Competent Person (Glazing). All special applications of glass such as, but not limited to, underwater viewing panels, glass floors, glass balustrades, stair treads, frameless entrances and bedded assemblies require the written approval of a Competent Person (Glazing). Such written approval shall be included with the glazing certificates issued to the Building Inspector for the relevant contract.

Table 1: Dimensions for vertical glass supported in a frame on all sides in external walls in buildings where the height measured from the ground to the top of such wall does not exceed 10m.

Nominal glass thickness in mm	Maximum pane area, m <sup>2</sup>					
	3	4	5	6	8	10
Monolithic Annealed Glass	0,75	1,5	2,1	3,2	4,6	6,0
Patterned Annealed & Wired Glass	-	0,75	1,2	1,9	2,6	3,4
Laminated Annealed Safety Glass	-	-	-	2,9	4,3	5,7
Toughened Safety Glass	-	1,9	3,0	4,5	8,0	8,0

Table 2: Dimensions for vertical glass supported by a frame on all sides in internal walls.

Nominal glass thickness in mm	Maximum pane area, m <sup>2</sup>					
	3	4	5	6	8	10
Monolithic Annealed Glass	0,75	1,5	2,1	3,2	4,6	6,0
Patterned Annealed & Wired Glass	-	0,75	1,2	1,9	2,6	3,4
Laminated Annealed Safety Glass	-	-	-	4,1	6,0	7,2
Toughened Safety Glass	-	3,0	4,2	6,4	9,2	9,2

Table 3: Dimensions for vertical glass supported by a frame on two opposite sides in external walls in buildings where the height measured from the ground to the top of such wall does not exceed 10m.

Nominal glass thickness in mm	Maximum span in metres					
	3	4	5	6	8	10
Monolithic Annealed Glass	-	0,4	0,5	0,6	0,85	1,0
Patterned Annealed & Wired Glass	-	0,25	0,3	0,35	0,5	0,6
Laminated Annealed Safety Glass	-	-	-	0,55	0,8	0,95
Toughened Safety Glass	-	0,55	0,7	0,85	1,15	1,3

Table 4: Dimensions for vertical glass supported by a frame on two opposite sides in internal walls.

Nominal glass thickness in mm	Maximum span in metres					
	3	4	5	6	8	10
Monolithic Annealed Glass	-	0,65	0,8	0,95	1,3	1,55
Patterned Annealed & Wired Glass	-	0,4	0,48	0,57	0,78	0,9
Laminated Annealed Safety Glass	-	-	-	0,9	1,25	1,5
Toughened Safety Glass	-	0,9	1,1	1,3	1,75	2,0

Table 5: Dimensions for polycarbonate panels supported by a frame on all sides in external walls where the height measured from the ground to the top of such wall does not exceed 10m.

Thickness in mm	Aspect ratio (long dimension : short dimension)		
	1:1 < 1,5:1	>1,5:1 < 2,5:1	>2,5:1 < 3,5:1
	Maximum pane area m <sup>2</sup>		
2	0,2	0,24	0,32
2,5	0,275	0,52	0,44
3	0,425	0,52	0,70
4	0,625	0,78	1,05
5	0,85	1,05	1,45

15mm edge cover shall be provided

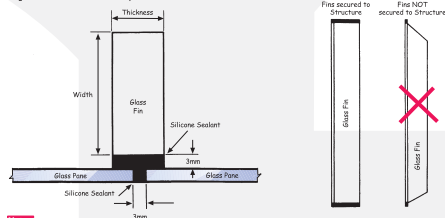
Table 6: Dimensions for polycarbonate panels supported by a frame on all sides in internal walls.

Thickness in mm	Aspect ratio (long dimension : short dimension)		
	1:1 < 1,5:1	>1,5:1 < 2,5:1	>2,5:1 < 3,5:1
	Maximum pane area m <sup>2</sup>		
2	0,35	0,4	0,525
2,5	0,45	0,55	0,725
3	0,725	0,85	1,2
4	1,05	1,3	1,75
5	1,4	1,75	2,75

15mm edge cover shall be provided

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Under Section 21SOUTH AFRICAN  
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Figure 1 - Detail of fin assembly



## Notes:

The above has been based on SANS 10400-N: 2010 Edition 3 for a Fin Height/Main pane width Ratio of 1.0 or less.

1) A minimum windloading of 600 Pa is used for the determination of glass fin dimensions for internal and external applications.

2) A minimum glass fin width of 150 mm.

3) Glass fin thickness of 12, 15, 19 or 25 mm.

4) Glass fins must be of safety glass i.e. toughened, laminated or multilaminated.

Any deviations from the above are to be approved in terms of SANS 10400 by a duly appointed competent person (glazing) in writing for each individual contract / application.

Table 7: Minimum glass fin dimensions

Fin Height m	Pane Area	
	Internal applications mm x mm	External applications mm x mm
1,5	150 x 12	150 x 15
2	150 x 12	150 x 19
2,5	150 x 12	175 x 19
3	175 x 15	200 x 25
3,5	225 x 15	275 x 25
4	275 x 15	300 x 25

Table 8: Flat glass panels to be used in lift car walls

Type of glass	Diameter of inscribed circle	
	1 m max.	2 m max.
	Minimum thickness mm	
Laminated, toughened	8 (4 + 4 + 0,76)	10 (5 + 5 + 0,76)
Laminated	10 (5 + 5 + 0,76)	12 (6 + 6 + 0,76)

Table 9: Flat glass panels to be used in horizontally sliding doors in lifts

Type of glass	Minimum thickness mm	Width mm	Free door height mm	Fixing of the glass panels
Laminated, toughened	16 (8 + 8 + 0,76)	360 to 720	2,1 max.	Two fixings upper and lower
Laminated	16 (8 + 8 + 0,76)	300 to 720	2,1 max.	Three fixings upper/lower and one side
Laminated	10 (6 + 4 + 0,76) (5 + 5 + 0,76)	300 x 870	2,1 max.	All sides

NOTE: These values are only valid provided that, in the case of the three-side or four-side fixing, the fixings are rigidly connected to each other.

## Safety Glazing Examples

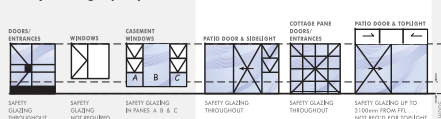


Figure 2 - Examples of safety glazing requirements in doors and windows

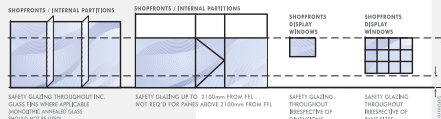


Figure 3 - Examples of safety glazing requirements in shop fronts or display windows

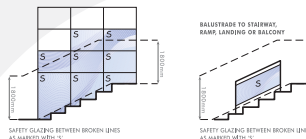


Figure 4 - Examples of safety glazing requirements around staircases and landings

## 4.3 Transparent glazing

Where transparent glazing is used and is not likely to be apparent to, or suspected by, any person approaching it, such glazing shall bear markings that shall render it apparent to such person.

## Energy Usage in Building - SANS 204

In the event that the individual fenestration manufacturer has not tested his product at the Rotatable Guarded Hot Box the following default U-values and solar heat gain coefficients (SHGC) shall apply:

Glass Type	Performance Values		
	Aluminium / Steel Framing	Timber / PVCU / Aluminium Thermal Break Framing	
Single - clear	7,9	0,81	5,6
Single - tinted	7,9	0,69	5,6
Clear double (3/6/3)	4,23	0,72	3,0