

SAFE4KIDS WINDOWS & DOORS

BCA COMPLIANT RESTRICTED OPENINGS

Injury and death of children as a result of falls from windows are a tragic and preventable occurrence. The Australian Building Code has been updated in 2013 to establish regulations for the installation of windows with restricted openings in applications where there is a risk of injury or death from accidental falls. AWS supports this initiative and has undertaken extensive research and development to allow the supply and installation of compliant window systems that will reduce the risk of injury. When installing into applications which are deemed by the BCA to require the installation of guards or restricted openings, windows can be fitted with:

- Restricted opening chain winders
- Buffer stops
- Security grilles and guards
- Restricted opening latches

BACKGROUND

The Building Code of Australia requires restriction devices to be fitted and tested as outlined below.

Apply a 250N force with a 125mm bullet shaped object to the most vulnerable point perpendicular to the sash opening of the window for a period of 10 seconds then remove.

If the 125mm bullet shaped object passes completely through the opening at any point once the force is applied, the product would be deemed as a failure.

Barriers or locks are required to be fitted on operable windows in Early Childhood Centres and in habitable rooms of residential buildings (including apartments and multi-storey homes) where windows are more than two metres above the ground.



AWS COMPLIANT SYSTEMS

AWS have conducted extensive testing on window products to ensure their compliance with BCA requirements for windows in elevated applications. The following AWS window systems can be fitted with appropriate restrictors to comply with these requirements.

SAFE4KIDS TESTED - CERTIFIED	
Series 502, 504, 506 Sliding Window	▲
Series 514 Double Hung Window	▲
Series 516 Awning Window	▲
Series 517 Awning Window	▲
Series 525 Louvre Window	▲
Series 602 Sliding Window	▲
Series 613 Sashless Double Hung Window	▲
Series 614 Double Hung Window	▲
Series 616 Awning Window	▲
Series 616 Casement Window	▲
Series 616TR Awning/Casement Window	▲
Series 726 Awning Window	▲
Series 726 Casement Window	▲
Series 726TR Awning/Casement Window	▲
Series 452 Commercial Sliding Window	▲
Series 453 Commercial Double-Hung Window	▲
Series 456 Commercial Awning Window	▲
Series 461 Apartment Sliding Window	▲
Series 462 Architectural Sliding Window	▲
Series 463 Architectural Double-Hung Window	▲
Series 464 ClearVENT™ Sashless Double-Hung	▲
Series 466 Awning Window	▲
Series 466 Casement Window	▲
Series 467 Awning/Casement Window	▲

PRODUCT IDENTIFICATION

Throughout AWS brochures, websites and literature, window systems which meet BCA requirements for windows in elevated applications are identified with the SAFE4KIDS™ symbol illustrated below.



PRODUCT SPECIFICATION

When specifying AWS windows for elevated applications, please make your fabricator aware of this requirement as additional restrictors, hardware and components are required during manufacture to ensure compliance.

PRODUCT LABELLING

All AWS windows supplied which comply with BCA requirements for windows in elevated applications will be identified with the following adhesive label:



In 2011, in response to a spate of children falling from windows, the Australian Building Control Board (ABCB) introduced new measures in BCA2013 to specifically prevent small children from falling from windows and balconies. The requirements will now read:

PERFORMANCE REQUIREMENTS DP3

Where people could fall -

- (a) 1m or more-
 - (i) from a floor or roof or through an opening (other than through an openable window) in the external wall of a building; or
 - (ii) due to a sudden change of level within or associated with a building; or
- (b) 2m or more from a floor through an openable window-
 - (i) in a bedroom in a Class 2 or 3 building or a Class 4 part of a building; or
 - (ii) in a Class 9b early childhood centre; or
- (c) 4m or more from a floor through an openable window not covered by (b), a barrier must be provided which must be-
- (d) continuous and extend for the full extent of the hazard; and
- (e) of a height to protect people from accidentally falling from the floor or roof or through the opening or openable window; and
- (f) constructed to prevent people from falling through the barrier; and
- (g) capable of restricting the passage of children: and
- (h) of strength and rigidity to withstand-
 - (i) the foreseeable impact of people; and
 - (ii) where appropriate, the static pressure of people pressing against it.

Limitations:

DP3 does not apply where such a barrier would be incompatible with the intended use of an area such as a stage, loading dock or the like.

DP3(g) does not apply to -

- (a) fire-isolated stairways, fire-isolated ramps, and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and
- (b) Class 7 (other than carparks) and Class 8 buildings and parts of buildings containing those classes.

DEEMED TO SATISFY PROVISIONS

D2.24 Protection of openable windows

- (a) A window opening must be provided with protection, if the floor below the window is 2m or more above the surface beneath in-
 - (i) a bedroom in a Class 2 or 3 building or Class 4 part of a building; or
 - (ii) a Class 9b early childhood centre.

(b) Where the lowest level of the window opening is less than 1.7m above the floor, a window opening covered by (a) must comply with the following:

- (i) The openable portion of the window must be protected with-
 - (A) a device to restrict the window opening; or
 - (B) a screen with secure fittings.
- (ii) A device or screen required by (i) must-
 - (A) not permit a 125 mm sphere to pass through the window opening
 - (B) resist an outward horizontal action of 250 N against the-
 - (aa) window restrained by a device; or
 - (bb) screen protecting the opening; and
 - (C) have a child resistant release mechanism if the screen or device is removed, unlocked or overridden.
- (c) A barrier with a height not less than 865mm above the floor is required to an openable window-
 - (i) in addition to window protection, when a child resistant screen release mechanism is required by (b) (ii)(C); and
 - (ii) for openable windows 4m or more above the surface beneath if the window is not covered by (a).
- (d) A barrier covered by (c) must not-
 - (i) permit a 125mm sphere to pass through it; and
 - (ii) have any horizontal or near horizontal elements between 150mm and 760mm above the floor that facilitate climbing.

The new requirements, which will come into effect on 1 May 2013, apply only to windows in bedrooms in Class 1, 2, 3 buildings, Class 4 part of a building or Class 9b early childhood centres. They are intended to apply to two storey and above buildings and parts of single storey buildings on steeply sloping blocks. All other windows where the fall height is 4m or greater will follow the existing requirements (as per D2.24 (c) above).

The important factors are the size and height above the floor of the opening and the existence of footholds that can be used for climbing. For openings within 1700mm above the floor:

If the opening is more than 865mm above the floor and there are no climbable elements, then removable screens or restrictors that can be overridden by an adult may be used.

If the opening is less than 865mm above the floor or there are climbable elements, then permanent screens or restrictors are required.

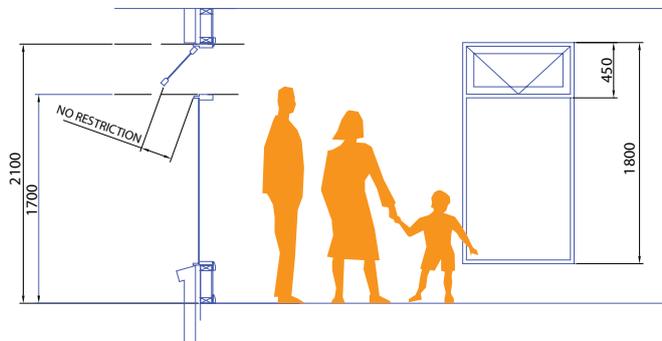
For all other windows where the fall height is 4m or greater, the opening is more than 865mm above the floor and there are no climbable elements, no screens or restrictors are required.

TYPICAL SCENARIOS

CASE 1

No openings within 1700mm of the floor.

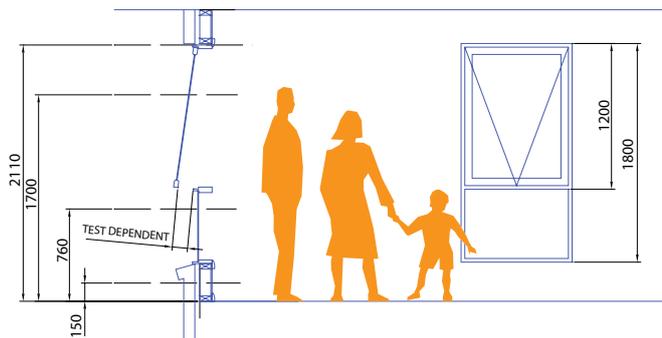
No restrictions apply



CASE 2

Opening within 1700mm of the floor and climbable element between 150mm and 750mm above the floor.

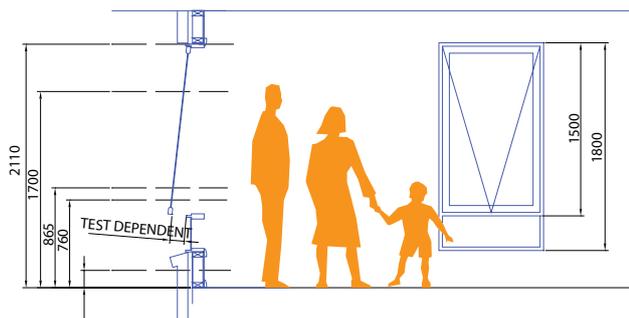
The screen or restriction device (non-removable) must resist a 125mm bullet probe passing through the window when it has a 250N force applied for 10 seconds to the most vulnerable areas. Also no gaps shall form such that a 125mm diameter sphere can be passed through the window in other areas of the window during the test.



CASE 3

Opening within 865mm of the floor; and climbable element between 150mm and 760mm above the floor.

The screen or restriction device (non-removable) must resist a 125mm bullet probe passing through the window when it has a 250N force applied for 10 seconds to the most vulnerable areas. Also no gaps shall form such that a 125mm diameter sphere can be passed through the window in other areas of the window during the test.

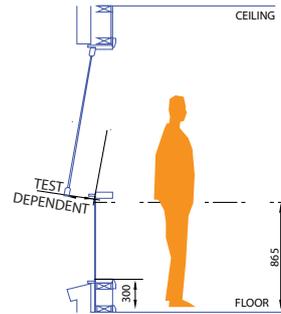


WINDOWS WHERE THE HEIGHT IS 4M OR GREATER

CASE 4

A window with a transom above 865mm and a sill height greater than 150mm. Although the transom is higher than 865mm, the height of the window sill can facilitate climbing and so the opening of the sash must be restricted.

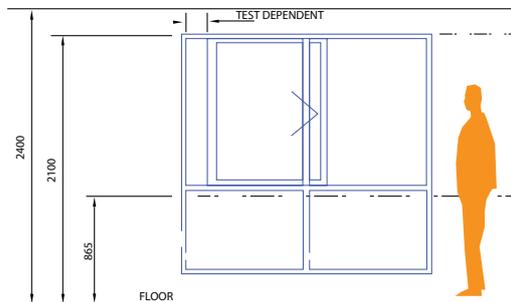
The screen or restriction device (non-removable) must resist a 125mm bullet probe passing through the window when it has a 250N force applied for 10 seconds to the most vulnerable areas. Also no gaps shall form such that a 125mm diameter sphere can be passed through the window in other areas of the window during the test.



CASE 5

Window with a transom above 865mm, and a sill height less than 150mm. Opening restricted to 125mm above transom.

The screen or restriction device (child resistant, removable) must resist a 125mm bullet probe passing through the window when it has a 250N force applied for 10 seconds to the most vulnerable areas. Also no gaps shall form such that a 125mm diameter sphere can be passed through the window in other areas of the window during the test.



CASE 6

A window with transom below 865mm, and a sill height less than 150mm. The openable part of the window is within 865mm of the floor, so the opening must be restricted.

The screen or restriction device (non-removable) must resist a 125mm bullet probe passing through the window when it has a 250N force applied for 10 seconds to the most vulnerable areas. Also no gaps shall form such that a 125mm diameter sphere can be passed through the window in other areas of the window during the test.

