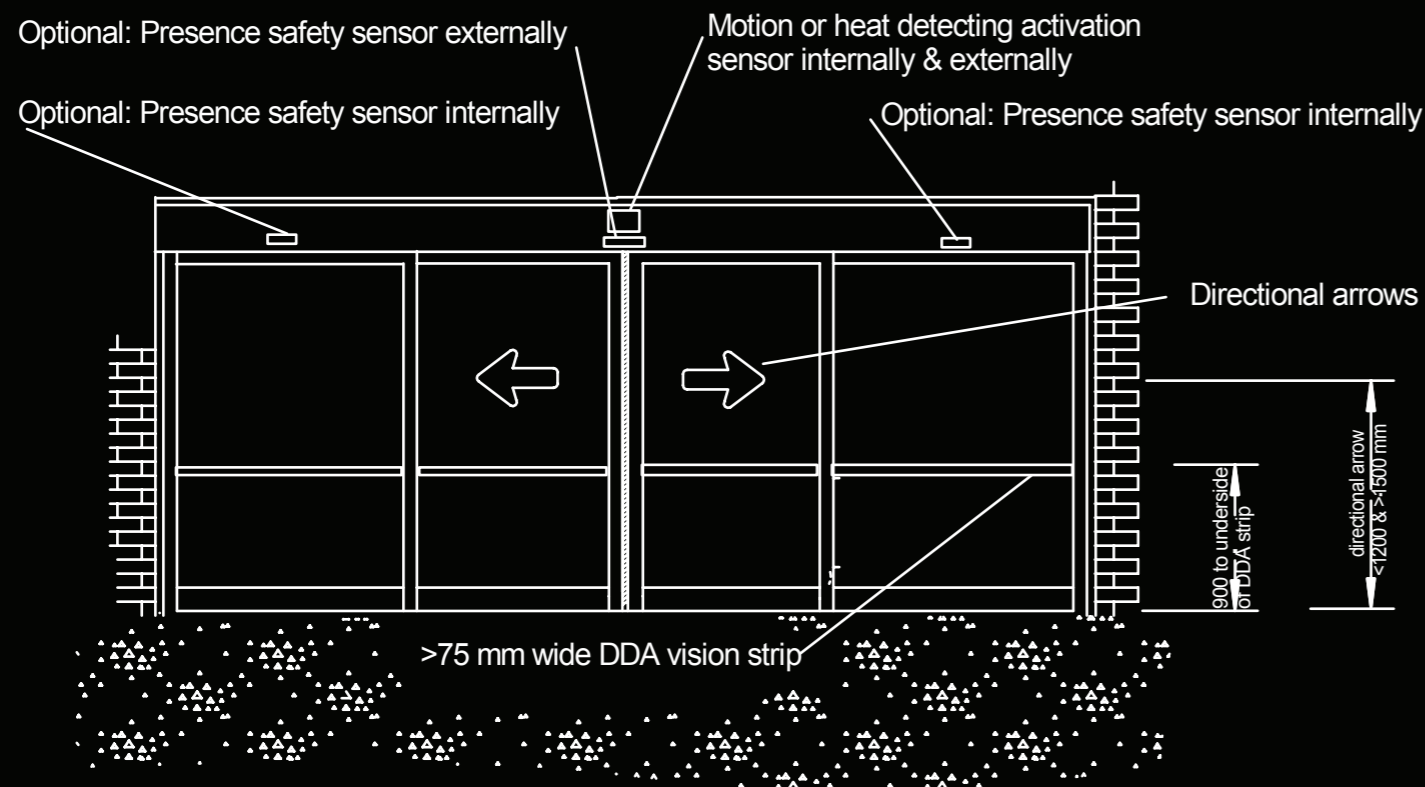


SIGNAGE FOR AUTOMATIC SLIDING DOORS

A automatic door is required to be safe guarded by the following signage:

1. An indicator sign in the form of an arrow of minimal size of 100 mm long by 40 mm high visible from both sides of the door leaf between 1.2 m and 1.5 m above the floor level as close as practical to the leading edge, with the head of the arrow pointing in the direction of the door leaf travel when opening. Colour of the arrow shall be "off white". This directional arrow as nominated in AS 5007 is the responsibility of the auto door supplier.
2. The design for access and mobility under the Disability Discrimination Act (DDA), The building codes of Australia and the Australian standard for Glass in Buildings AS 1288 requires frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening where there is no chair rail, handrail or transom, should be clearly marked for the full width with a contrasting line not than 75 mm wide at a height between 900 mm and 1000 mm above the floor. The contrasting line should have a minimum luminance contrast with the back ground when viewed from either side, the fitting of the vision strip is the responsibility of the contractor providing the glazing.



ADIS
AUTOMATIC DOORS

DESIGN GUIDE

FOR AUTOMATIC SLIDING DOOR

- ▶ Draw in & finger trap hazard
- ▶ Impact hazard
- ▶ Crushing hazard
- ▶ Shear hazard
- ▶ Head / Body entrapment hazard
- ▶ Fire escape requirements
- ▶ Signage

A reference guide to assist designers and specifiers of automatic sliding doors with the items that need to be considered for the safe design and operation of automatic doors and associated equipment required under Australian Standard AS 5007- 2007.

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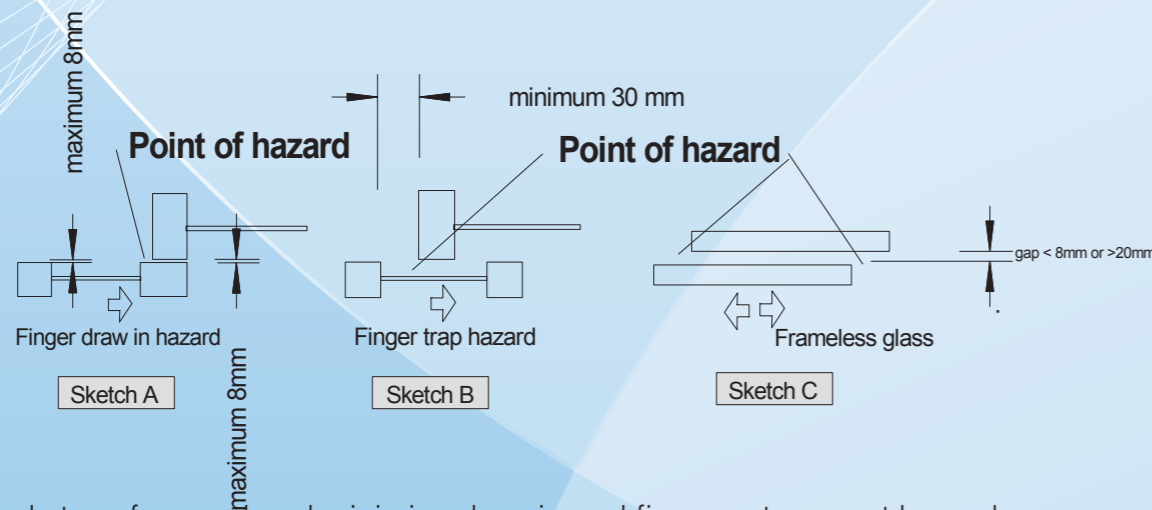


The AUSTRALIAN Automatic Door Company

DRAW IN HAZARD FOR AUTOMATIC SLIDING DOORS

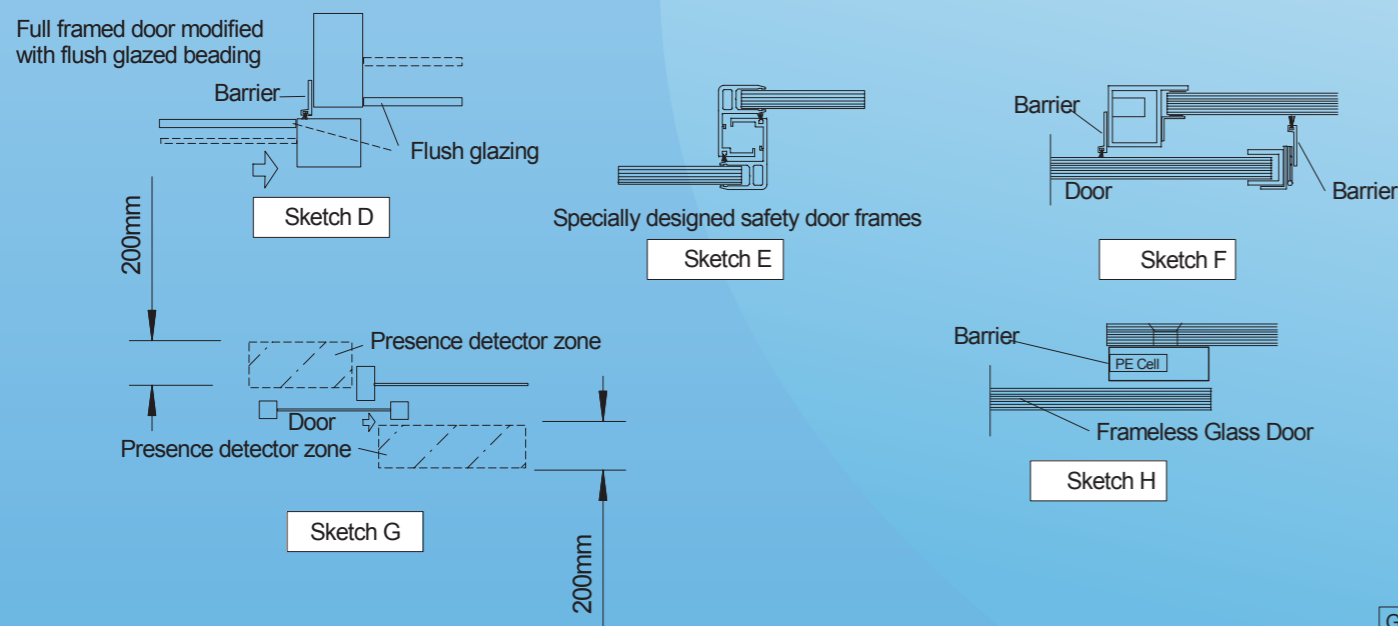
A draw in or finger trap hazard exists under the following conditions:

1. A gap of greater than 8mm between two sliding surfaces is considered likely to allow fingers to be drawn in.
2. Hands are considered safe guarded where the gap between the two sliding surfaces are greater than 20mm.
3. Where attachments are fitted to the door or sidelight such as letter boxes, letter flaps, handles grilles or other surface mounted hardware.
4. A gap of less than 30mm between the fixed door jamb and the leading stile glazed rebate.



Methods to safe guard and minimise draw in and finger entrapment hazard.

1. Adjust the framing to eliminate the hazard e.g. add flush glazing: realign door, move and reset the fully open door stop to ensure that the 30mm gap is maintained & or
2. A barrier profile hard enough to resist the penetration of fingers & or
3. Replace the framing system with a flush glazed slimline safety framing or
4. The fitting of a additional presence sensor that shall detect 200mm ahead of the hazard point, this sensor is to be capable of detecting a stationary person for a minimum of 60 seconds.
5. Attachments are required to be removed.



FIRE ESCAPE REQUIREMENTS FOR AUTOMATIC SLIDING DOORS

The Building Code of Australia section D2 Construction of exits requires Automatic sliding doorways serving as or part of a required exit to include the following performance features:

- 19b(iv)A It must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and
- 19(iv)B if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm any where in the fire compartment served by the door.
- 21 The door in a required exit or forming part of or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by a single hand downward action or pushing action on a single device which is located between 900mm and 1.2m from the floor, except if it-
- 21c(i) Serves an occupancy where special arrangements for security are necessary and it can be immediately unlocked by operating a fall-safe control switch, not contained within a protective enclosure. AS 5007 (3.3.2 Manual activation) and AS 1428.1-2001 (11.2.2) recommended in addition that the switch shall be mounted in a position where the user has an unimpeded view of the door, within a area that a person walking at normal pace has enough time to egress the doorway before it closes and is mounted between 900mm and 1100mm from the finished floor. The button shall not be fitted to a position where the user will not be struck by the door during its opening cycle. The design of the button shall satisfy the needs of the user and the requirements for person with disability to have a switch width of a recommended 35mm. The button shall be suitably labeled by a sign –or
- 21d Is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler/smoke/heat detector system installed throughout the building;

Note! Special requirements apply to places of public entertainment in NSW.

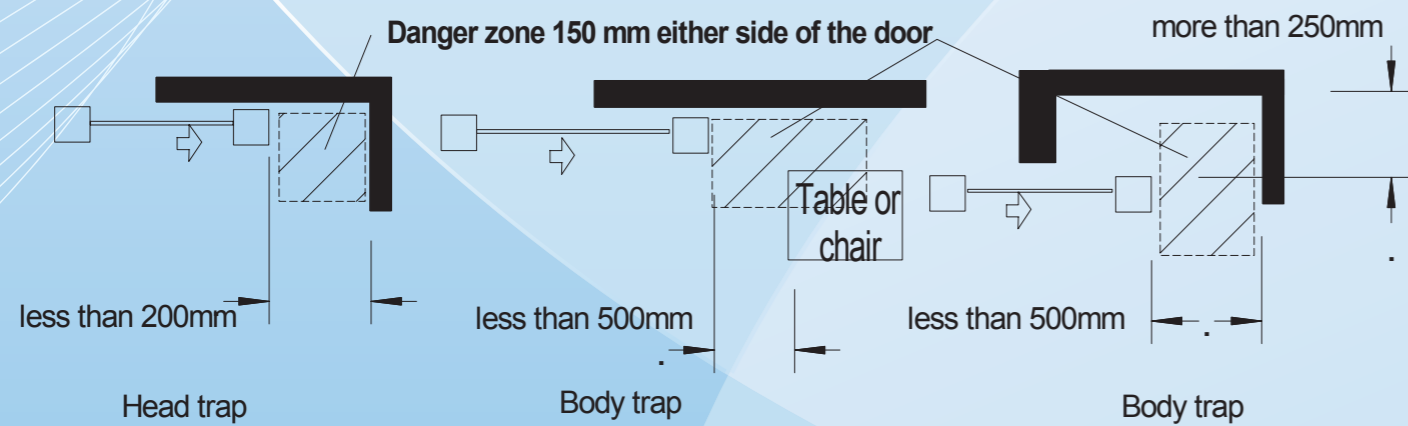
The NSW environmental Planning and Assessment Regulations 2000 part 9 nominates Automatic fail-safe devices to be a statutory fire safety measures are as follows;

- A. Before a building under construction can be occupied the owner of the building has to provide the local Council and Fire Commissioner a final fire certificate stating that all the fire safety measures in the building have been carried out a final fire safety assessment. (item 169)
- B. **The final fire safety statement** must be carried out by a properly qualified person within 3 months of the date of the final fire certificate. The person who carries out the assessment must inspect, test and verify the performance of the fire safety measure. (item 171)
- C. **The annual fire safety statement must be carried out by a properly qualified person** within 3 months prior to the anniversary date of the issue of the fire certificate. The person who carries out the test must inspect, test and verify the performance of the fire safety measure. (item 176)
- D. **Fire Safety Maintenance** The owner of the building must not fail to maintain the essential fire safety measure to a standard no less than that the specified in the buildings schedule or to the standard of design that was originally implemented; (item 182) AS 5007 and the manufacture ADIS Automatic Doors recommends that inspections and verification tests be made on a triennial basis (3 times a year)

HEAD & BODY ENTRAPMENT HAZARD FOR AUTOMATIC SLIDING DOORS

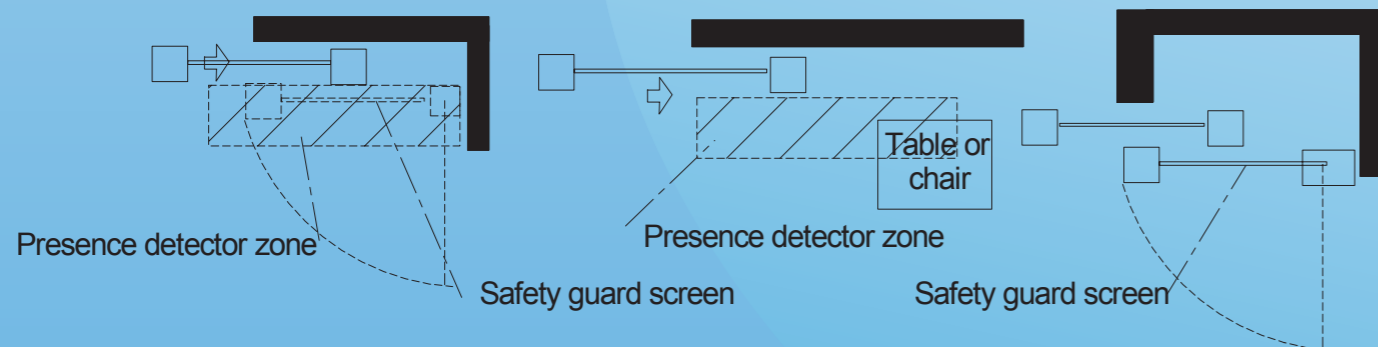
A head or body entrapment hazard exists under the following conditions:

1. The distance between the rear of the sliding door and adjacent parts surrounding is less than 200mm is considered a head trap.
2. The distance between the rear of the sliding door and adjacent parts surrounding is less than 500mm is considered a body trap.
3. The distance between the door and the sidelight or wall that it opens over is greater than 250mm is considered a body trap.



Methods to safe guard and minimise head and body hazard:

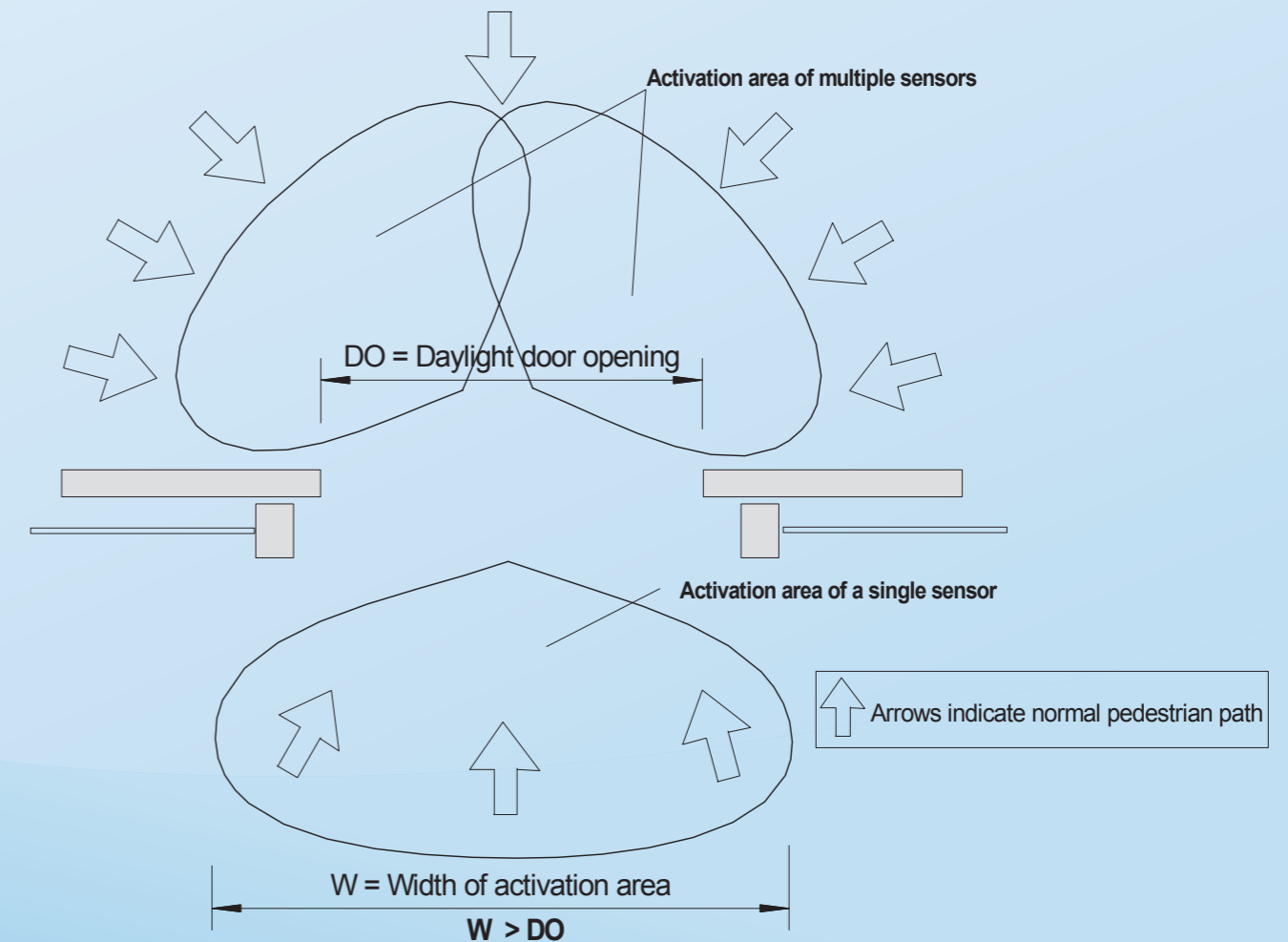
1. Add presence sensors to cover the full length of the doors opening stroke plus the width of the danger zone combined with a safety hazard warning sign & or
2. Add safety guard screens, screens must cover the length of the stroke of the door, be a minimum of 2m high, be pivotable to allow cleaning, shall be secured by tool or equal protection so that children shall not readily be able to open them, climb up them or get under them..



IMPACT HAZARD FOR AUTOMATIC SLIDING DOORS

A impact hazard may exist under the following conditions:

1. Where the activation system does not open the door/s sufficiently to allow a person walking at normal pace or
2. Where the activation system does not have a field wide enough to detect a person using the doorway when fully opened or
3. Where all lines of approach of traffic are not capable of item 1 or
4. The type and quantity of sensor is incorrect for the profile characteristics of the users of the doorway; e.g. elderly, infirm, disability and young children.



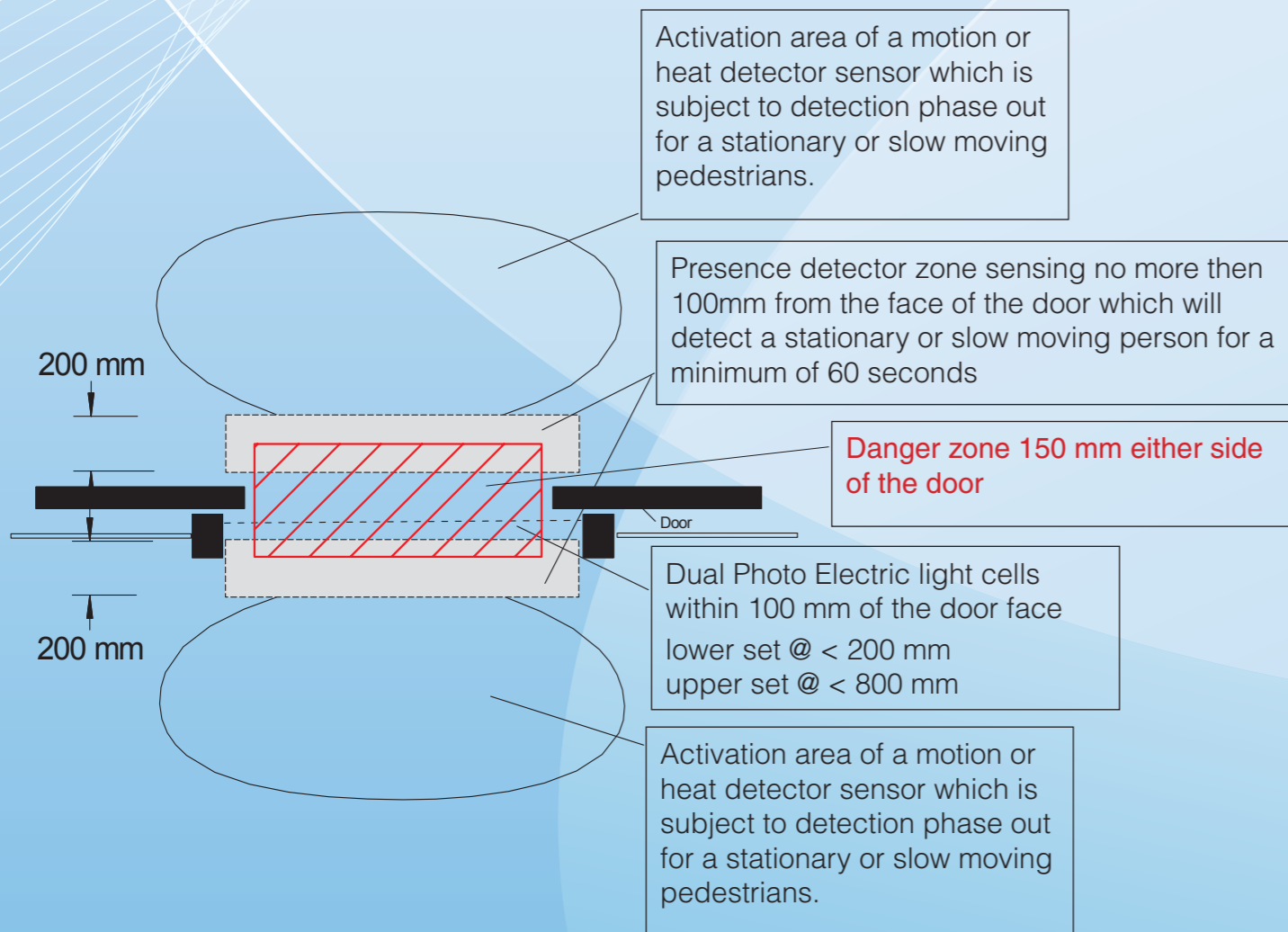
Methods to safe guard and minimise impact hazard

1. Adjust or replace the sensor so as to allow the door to open for a person walking at normal pace.
2. Adjust or replace the sensor to allow the sensor to have a field wide enough to cover the full width of the daylight door opening.
3. Add additional sensors or replace the existing sensor to ensure that all approach paths / all potential users are capable of opening the doors at normal pace.

CRUSHING HAZARD FOR AUTOMATIC SLIDING DOORS

A crushing hazard during the closing cycle may exist under the following conditions:

1. Where a single protective safety device is not fitted, i.e, PE cells, presence sensors or mats.
2. Where the absence or restriction of activation sensors creates a large danger zone that is not protected by presence sensors or mats.
3. Where the entrance way is used regularly by elderly, infirmed, disabled persons and young children where the danger zone is not protected by presence sensors or mats.
4. Where the doors closing speed exceeds the safe speed parameters (see AS 5007 for chart)



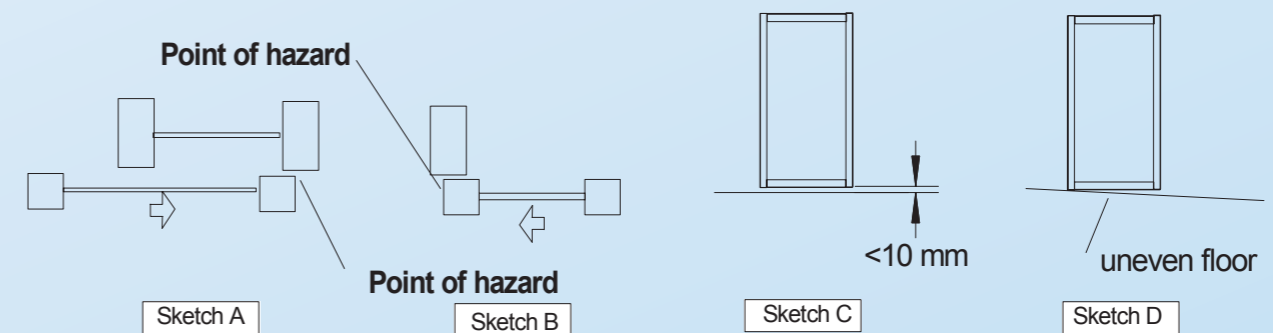
Methods to safe guard and minimise crushing hazard.

1. The fitting of a protective safety device e.g. PE cells, presence sensors or mats
2. Add presence sensors or mats to applications that have large danger zones or are used by the list of slow moving pedestrians as described in item 3 above.
3. Adjust the closing speed to slow the doors down below the 27J kinetic energy level.

SHEAR HAZARD FOR AUTOMATIC SLIDING DOORS

A shear hazard exists under the following condition:

1. Where the sliding door when opening or closing passes a fixed object that could cause damage to fingers, hands or a body.
2. Where the gap between the bottom of the door and the finish floor is greater than 10 mm or is uneven during the doors full stroke cycle.



Methods to safe guard and minimise shear hazard

1. Adjust the doors fully open door stop to ensure that the 30mm gap is maintained or
2. Fit an additional box section to the door jamb so that the door butts to the jamb instead of overlapping and or
3. Add flush glazing to intersecting mullions and or
4. Adjust the door hanger bracket system to lower the door to below a 10mm floor finish gap and or 5. Fit guards to the bottom of the door to minimise the gap to below 10mm or to level the gap on uneven floors.

