



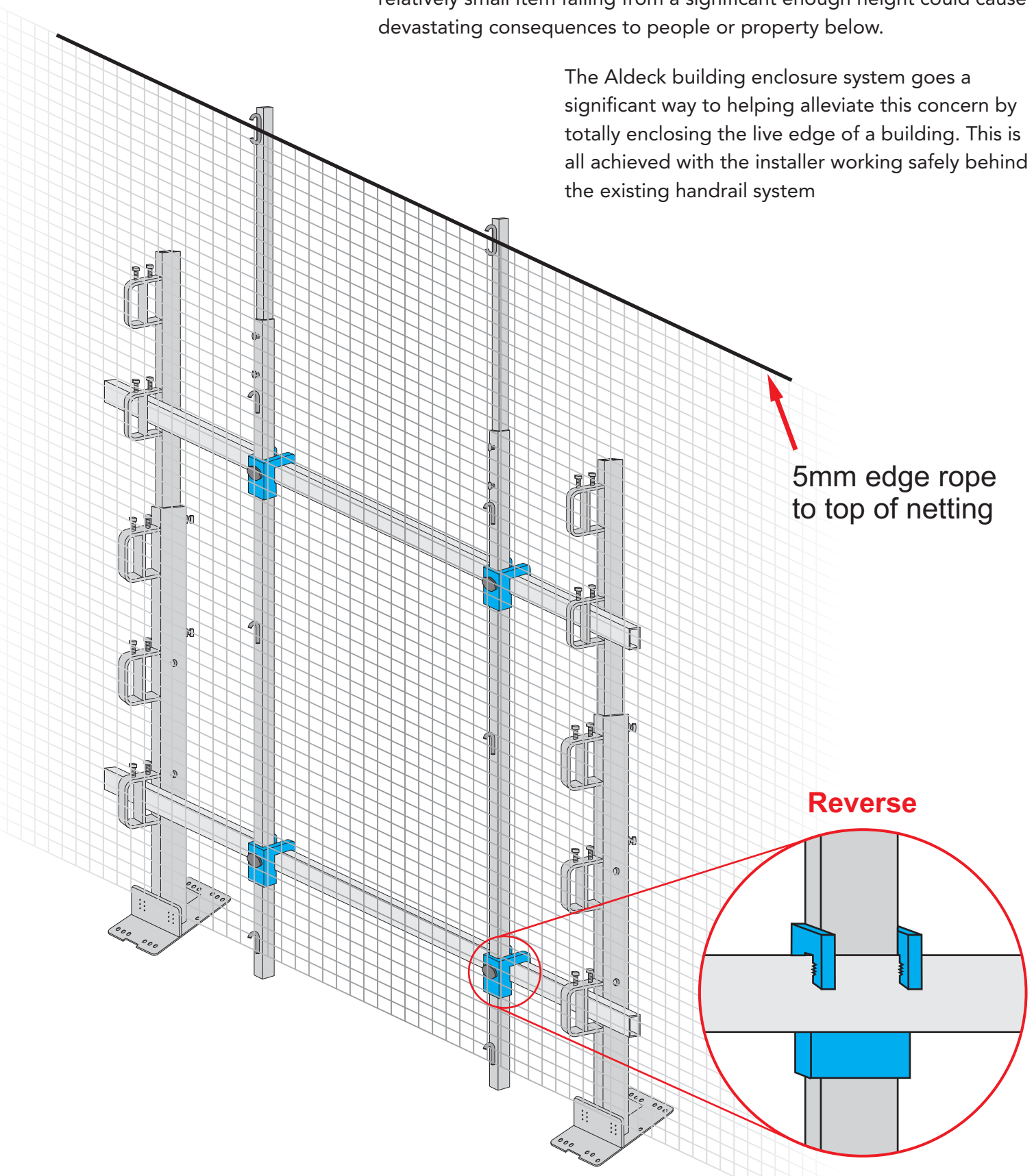
BUILDING ENCLOSURE SYSTEM

INSTALLATION GUIDE

Australian Patent 2017101261

As buildings are being built higher the danger of items falling and hitting innocent pedestrians below is becoming a significant concern. Even a relatively small item falling from a significant enough height could cause devastating consequences to people or property below.

The Aldeck building enclosure system goes a significant way to helping alleviate this concern by totally enclosing the live edge of a building. This is all achieved with the installer working safely behind the existing handrail system



THIS IS A DEBRIS RESTRAINT SYSTEM ONLY. THIS SYSTEM SHOULD ONLY TO BE USED IN CONJUNCTION WITH THE ALDECK TELESCOPIC HANDRAIL SYSTEM.

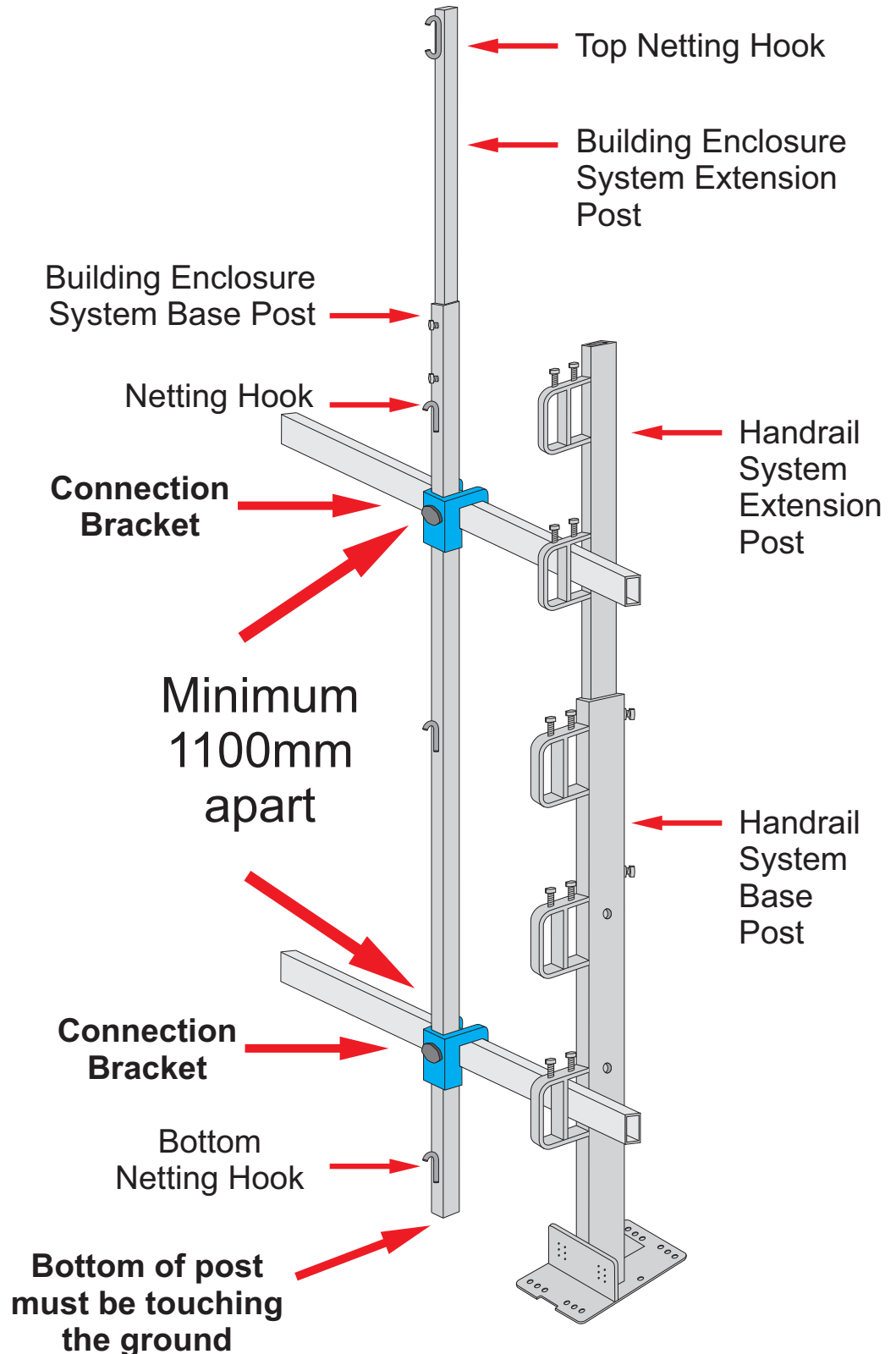
INSTALLATION PROCEDURE

STEP 1

Attach enclosure system posts to the Aldeck handrail system at required intervals as per engineering certificate, (on pages 4 and 5 of this guide) making sure the connection brackets are at the 1.1m minimum spacing and that the base of the bottom post is touching the ground.

STEP 2

While the building enclosure system extension post is fully retracted into the base post, attach the netting to the top netting hook of the extension post. Repeat this process until all of the netting is hooked onto the top hook.



STEP 3

Raise the top post with netting attached till it hits into the structure above. Depending on height to be raised this may need to be done incrementally.

STEP 4

Once top post hits into structure above lock top post into position and continue this process to all additional posts till edge of building is fully enclosed.

STEP 5

Attach bottom of netting to hook at bottom of the base post and lock the netting to handrail system with intermittent use of cable ties.

Continue this procedure until all mesh is securely held in position.

Bottom
Netting Hook



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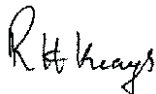
Dear Anton,

ALDECK BUILDING ENCLOSURE SYSTEM STRUCTURAL DESIGN CERTIFICATION

1. The Aldeck "Building Enclosure System" is described in the attached brochure. It uses a net of "Debris Mesh" supported by a perimeter edge-rope, and telescoping posts to provide a barrier from floor to ceiling to prevent objects from passing outside the enclosure and falling to ground. The telescoping posts are clamped to the inside of the Aldeck Handrail System.
2. The details of the Building Enclosure System are as follows:
 - Debris Mesh 18x18x15 ply.
 - Edge Rope (sewn into mesh) – 5mm polyprop.
 - Telescoping enclosure posts with clamp screws to keep the upper part of the telescope raised.
 - Clamps to secure the enclosure posts to the Rails of the Aldeck Handrail System.
3. I have calculated the capacity of the Building Enclosure System to resist wind loads in service. I have relied upon the advice of the Debris Mesh supplier that this mesh is suitable for the application as a barrier to prevent objects passing outside the enclosure.
4. In the analysis for wind loading, I have verified that the system will remain intact in wind conditions up to the once-a-year gust, and that the complete system will not separate from the building in wind up to the 100-year return gust (as is normal for temporary works in construction). It is possible that component parts will suffer permanent deformation in the higher wind conditions. The Building Enclosure System should be inspected for damage after high winds have been experienced. (As a guide to inspection, this should be after the Bureau of Meteorology reports wind gusts in excess of 100kph.)
5. Design wind speeds vary with height off the ground – the higher, the stronger. They also vary between the suburbs with few tall buildings and the city with other tall buildings providing some shielding and so reducing design pressures. To minimise the number of components required for a particular installation, the spacings of posts noted below are varied according to height and whether the building is in the city or suburbs.
6. The Building Enclosure System is supplied in two height ranges – for floor to ceiling heights up to 3.5m, and for heights between 3.5 and 4.5m.

7. For the 3.5m system, the arrangements covered by this Certificate are as follows:
 - a. Enclosure Posts should be no more than 2.1m apart where the floor is less than 150m off the ground in the city or 75m in the suburbs. Beyond these heights, the spacings should be reduced to 1.4m.
 - b. Telescoping Enclosure Posts are attached to two Aldeck Handrail System Rails at 1100mm (minimum) apart. Handrail system posts should be at no more than 3m centres.
 - c. The connection of the Aldeck Handrail System to the building concrete floor is important, as it prevents the complete system from leaving the building. The standard base connection of 4/M8 Anchor Screws is adequate for City Buildings to 150m and Suburban Buildings to 75m. Beyond this floor height, replace the M8 Anchor Screws by M12 Anchor Screws.
8. For the 4.5m system, the arrangements covered by this Certificate are as follows:
 - a. Enclosure Posts should be at no more than 2.1 m centres for floors below 150m (City) or 75m (Suburban), or 1.5m centres above that height.
 - b. Telescoping Enclosure Posts are attached to the Aldeck Handrail System Rails at 1100 (minimum) apart.
 - c. Aldeck Handrail Posts should have four M12 Anchor Screws connecting to the slab in all cases.
 - d. Aldeck Handrail Posts must be at no more than 1.5m centres.
9. In both the 3.5m and 4.5m systems, there is an additional load on the end Enclosure Posts from the force in the edge-rope from wind load and initial tension. Calculations suggest this might cause those Posts to permanently bend towards the middle of the net. This is not a cause for alarm, as the Enclosure will continue to perform its function. When carrying out post-storm inspections, this is something to check; if the Enclosure Post is bent, replace it, and add a second post with lashing to share the edge-rope load.

Yours faithfully,



Dr Russell Keays, BE, PhD, FIEAust
RBP EC-2223