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# WEATHERTIGHT PERFORMANCE OF FLASHINGS FOR TALLER BUILDINGS

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Residential buildings are now better engineered to manage rainwater following the leaking building problem. The next challenge is to improve the weathertightness of medium-rise buildings which often use joint details from E2/AS1 but are subject to higher wind pressures and surface runoff rates. This study begins to address this challenge by measuring the water performance limits of the following E2/AS1 flashings with static and dynamic rain and wind loads to see how their performance might be improved:

- Horizontal H and Z jointers between direct fixed sheet claddings
- The window head flashing in a cavity wall
- A horizontal apron flashing at the junction between a roof and wall.

All of these joints were found to resist water leakage to pressures equivalent to the hydrostatic head of the upstand, so long as there were no air leakage paths through the joint. When vents were added, or openings were present that might arise due to construction tolerances, then the onset pressure for leakage was found to fall by approximately 50%. Vents, of course, are essential for ventilation drying in rainscreen walls and even with vents present, the onset of leakage was at roughly twice the pressure required in the E2/VM1 test. Opportunities were found to improve the way vented joints deal with runoff by enlarging the gap between the cladding and flashing. This prevented the outer joint volume from filling with water and occluding the vents.

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