

Masonry Cavity Walls, the Original Rainscreen System



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Benefits of cavity walls

- Moisture management
 - Drainage
 - Ventilation

Components of a masonry wall

- Backup Wall
- WRB or air-barrier (and flashing)
- Insulation
- Air space and drainage product
- Masonry anchors
- Brick or stone

Airspace in brick cavity walls

- Brick cavity walls with 2-inch airspace
- Brick cavity walls with 1-inch airspace or less
- Brick cavity walls with insulation and airspace
 - Examples: spray foam and rigid insulation
- Research and codes
 - BIA recommendations
- Images of problems

Wall drainage test study

- Product comparison testing
 - Masonry cavity wall collection products
- Test criteria; mortar bridging, drainage, and ventilation
- Test results

Benefits of full-wall drainage

- Clear drainage path from top of wall to bottom weeps
- Optimum ventilation throughout cavity
- Wall assembly details

How to drain masonry cavity walls

- Cavity walls of 1-inch or less of air space
- Cavity walls of 2-inch or greater of air space



Learning Objectives

- Review the benefits and principles behind having an open cavity within a masonry wall
- Analyze the most common practices in masonry cavity walls detailed with continuous rigid insulation, and identify the potential flaws that can lead to moisture failures
- Discuss airspace code and compare the performance of traditional mortar collection materials and full wall masonry drainage materials in cavity walls with rigid insulation and less than two inches of airspace Establish the best practices for designing and
- constructing a continuous insulated, well drained, and ventilated masonry cavity wall

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