

Technical Bulletin: Peacekeeper® 156 Discontinuous Wall System

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Introduction

In May 2004 the acoustic requirements in the Building Code of Australia (BCA) were revised. In the revision, discontinuous wall systems were introduced. They are required to be used in a number of situations including between a bathroom, laundry or kitchen and a habitable room (other than kitchen) in an adjoining dwelling. Discontinuous wall systems are used to minimise impact sound transmission.

Discontinuous Wall Construction

In the 2005 version of the BCA, the performance requirements for sound insulation are given in Sections 1.0.10 and P2.4.6 and the sound insulation requirements to comply with Sections 1.0.10 and P2.4.6 are given in Section 3.8.6.2. Table 3.8.6.1 of Section 3.8.6.2 gives the sound insulation requirements for a discontinuous wall system. In this table, discontinuous construction is defined as a wall system having a minimum 20 mm cavity between two separate leaves and for any wall system other than masonry there is no mechanical linkage between leaves except at the periphery. In the notes of Table 3.8.6.1, it is stated that a staggered stud wall is not deemed to be discontinuous construction.

It should be noted that the method given in Table 3.8.6.1 is just one method of achieving the performance requirements. Others methods can be used if these methods demonstrate similar or better performance to that given in Table 3.8.6.1.

Peacekeeper® 156 Discontinuous Wall System

The Peacekeeper® 156 discontinuous wall system satisfies the requirements of Section 3.8.6 (Table 3.8.6.1) of the 2005 version of the BCA. This system has separate top and bottom tracks for each side of the wall and has a minimum gap of 28 mm between a component on one side of the wall and the nearest component on the other side of the wall. The only possible direct path for impact sound transmission is through the structure to which the top and bottom tracks are connected. There is no direct path in the wall system itself. The Peacekeeper® 156 although referred to a staggered stud system in Powerscape literature should be considered as a double frame, offset stud, wall system.

Details of the Peacekeeper® 156 discontinuous wall system are given in Figures 1 and 2. Care must be taken in the placement of the insulation. The insulation must be cut between the studs and must not be compressed between the lining on one side of the wall and the stud on the other side of the wall. Compressing of the insulation between the stud and wall lining can lead to the passage of more structure borne sound and a degradation of the wall system. Care must be also taken to ensure that the studs are lifted above the bottom of the bottom track and are below the top of the top plate. Fasteners attaching the lining to the framing are not to be placed in the top and bottom tracks.

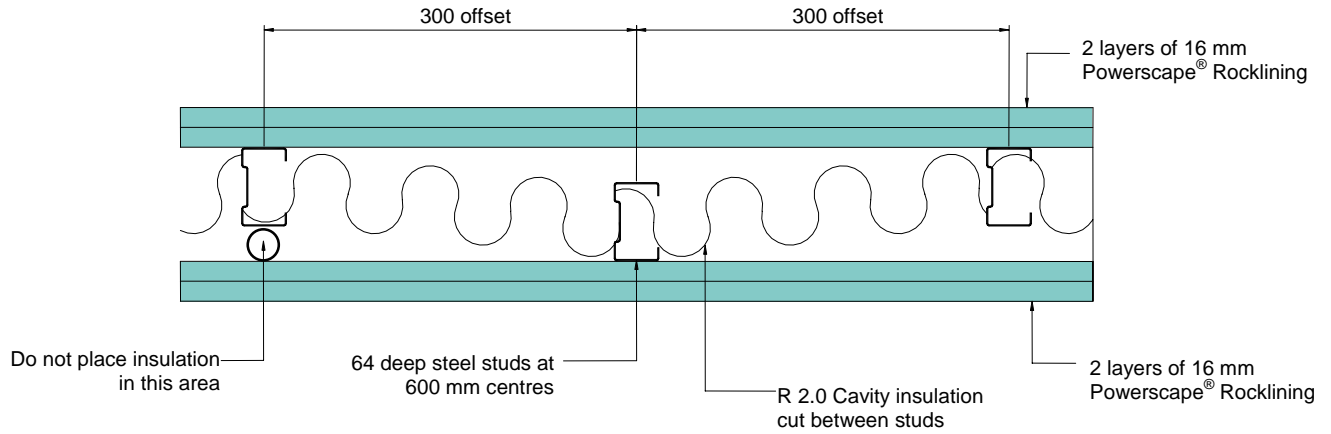


Figure 1
Section Plan of Wall

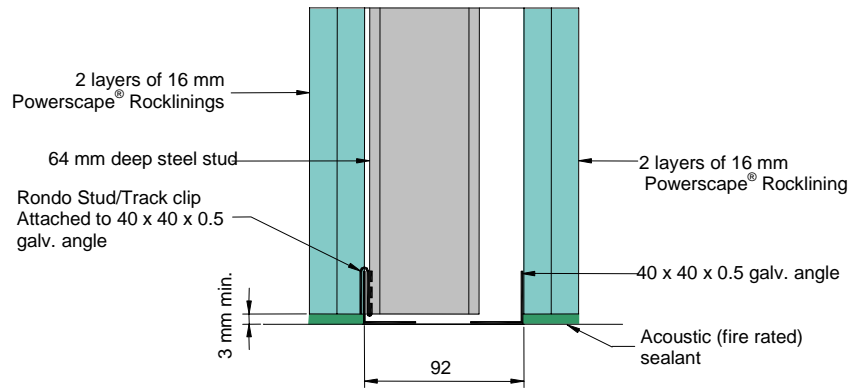


Figure 2
Detail of Base Connection