

## Wood Deck

Wood decks form an ideal base over which to apply Certi-label shakes or shingles, since they can be attached in the conventional manner.

Rigid insulation raises the issue of how to fasten Certi-label shakes or shingles. The use of abnormally long nails driven through the Certigrade shingles, the insulation and into the deck below is generally unsatisfactory. Horizontal strapping will be required to overcome the fastening difficulties (Figure 17). When strapping is used, fewer nails penetrate through the insulation to the deck, and greater thermal efficiency is achieved by reducing the number of conductors. In addition, the lengths of the nails may be chosen to prevent the points from protruding through the deck where they may mar the inside face.

If ice-damming is a potential problem or if reverse condensation is likely to occur, such as may be encountered in an ice arena, a cold roof system should be used in conjunction with horizontal strapping, and ventilation must be provided at the eaves and at the peak. In buildings such as ski cabins that may be subjected to heavy snow loads, it is usually necessary to fasten wood members (typically 38mm x 89mm on edge) from ridge to eave on the roof deck and place the rigid insulation between. Strapping is then applied across the top of these members, giving a ventilated air space and avoiding compression of insulation (Figure 18). For additional details on cold roof systems please see page 17.

The need for strapping can often be completely eliminated by the use of a false plywood deck, immediately over the insulation, to which the Certi-label shakes or shingles are directly fastened (Figure 19). Exterior-grade sheathing panels are ideal for this purpose, since they provide a strong, smooth surface. However, under certain conditions of slope and loading, there may be a tendency for the entire roof above the decking to creep downwards, bending the nail fastenings and compressing the insulation, thereby reducing its efficiency. In such cases, it is often desirable to install the vertical members as previously described.

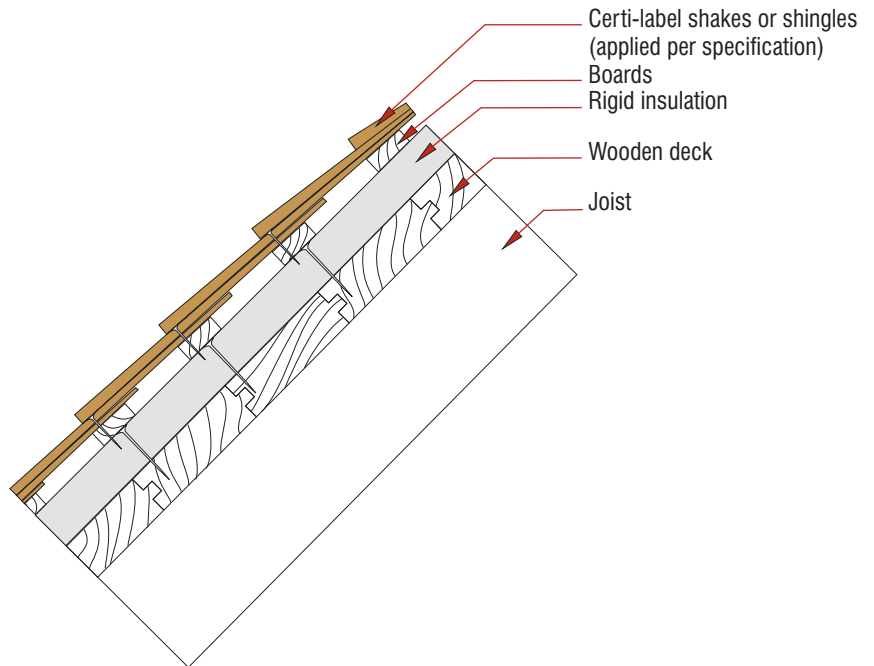


Figure 17: Specialty Roof Deck-Strapping Over Insulation

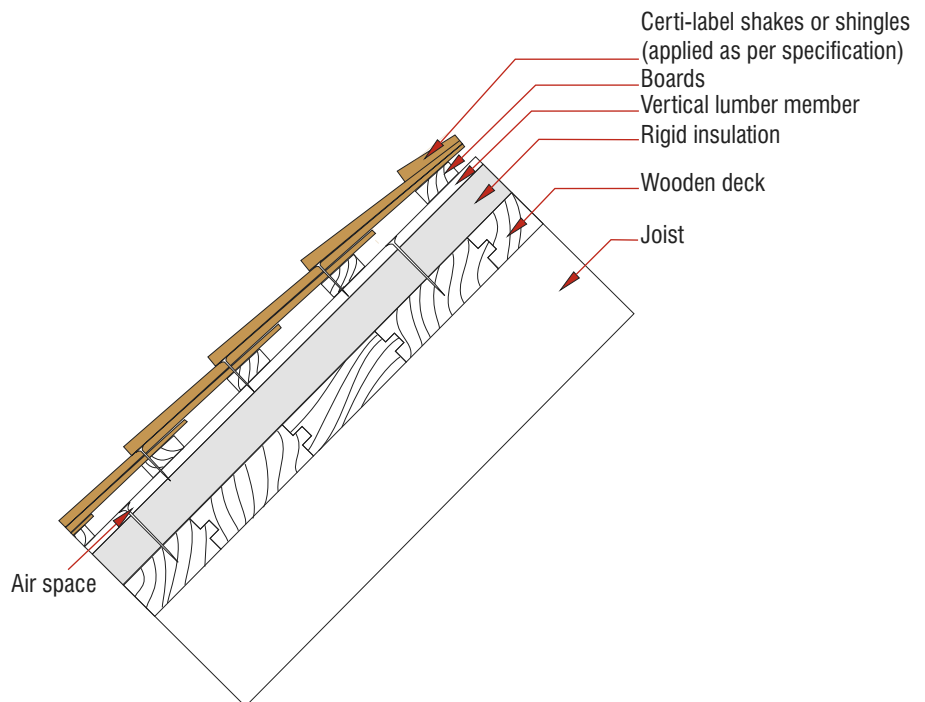


Figure 18: Specialty Roof Deck-Vented Roof

## Nails

If the Certi-label shakes or shingles are nailed directly through rigid insulation, a number of problems may be encountered. For instance, the longer nails have thicker shanks which tend to split the Certi-label shakes or shingles.

Product movement may cause a reduction in insulation efficiency. For this reason, the use of strapping or a false plywood deck is again recommended.