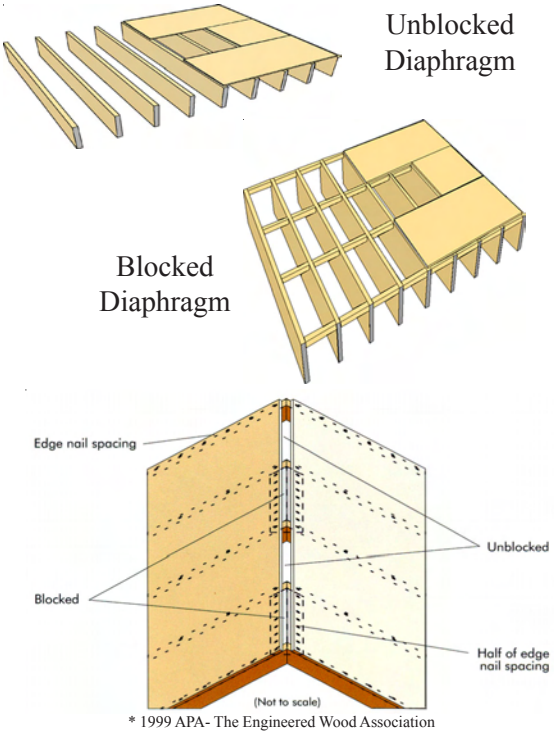
Trimline Rigid Roll Ridge Vent Application in Seismic and Wind Designs

According to the APA-The Engineered Wood Association, Continuous Ridge Vents, like Trimline and Trimline Plus, can be used in conjunction with a Roof Diaphragm and meet the requirements to withstand lateral loads in Seismic and High Wind Designs. Trimline and Trimline Plus can be used in unblocked as well as blocked Roof Diaphragms.

According to the APA with an unblocked diaphragm, there is no requirement for a connection to be made between unsupported edges of adjacent panels. With an unblocked diaphragm type construction Trimline and Trimline Plus ridge vents can be installed with no modification to the published installation instructions. In an unblocked diaphragm, only the 4-foot-wide panel ends occur over and are nailed to common framing. This is the most common type of diaphragm used in standard residential construction.

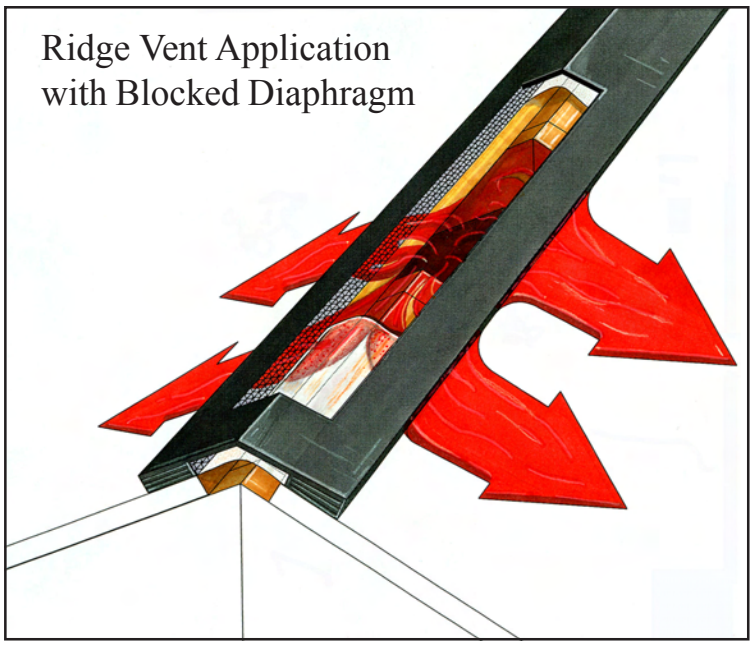
According to the APA with a blocked diaphragm, the use of a continuous ridge vent is slightly more challenging because all edges of all adjacent panels must occur over and be attached to common framing. This additional nailing provides a greater number of fasteners available to transfer shear from one panel to another, thus increasing the overall shear capacity and rigidity or stiffness of the diaphragm. This is as true for the ridge as it is for other panels occurring in a common plane. This can be done by placing blocking in alternating spaces between the rafters or joists. At the location where there is not blocking, the slot at the ridge that is cut for venting, is increased in width to the required opening for proper ventilation. At the location where there is blocking, the required nail spacing shall be halved, so that twice as many nails are present to make this connection in every other space.



Ridge Vent Application with Blocked Diaphragm

How is proper attic ventilation achieved with alternating blocking in a blocked diaphragm application?

With alternating blocking the determining factor for NFA (Net Free Area) is the width of the slot cut at the ridge of the roof. Since the length of the allowable venting area along the ridge is cut in half. The width of the slot is increased to 2.5 inches to insure proper ventilation.



When venting with a blocked diaphragm, warm air travels through the unblocked sections of the ridge, flowing over the blocked sections of the ridge and exiting along the entire length of the ridge vent. The warm air from the attic space will be properly vented using this application. Trimline Low Profile Ridge Vents will provide 12.7-sq.in.of NFA (Net FreeArea) per lineal foot of the roof in this application. Trimline Ridge Vents, when properly installed, meet or exceed the requirements of all recognized national building codes for ventilation.