

Energy Efficient Re-roofing

It is important to understand that when retrofitting over existing sloped metal or solid deck roof systems, the Roof Hugger sub-purlin will create an air-space cavity between the old and new roofs. This air-space presents several options to the contractor and building owner. Simply stated, the space can be used to improve the building inhabitant's comfort and environment as well as provide significant energy benefits through alternative energy resources. Consider the following before finalizing your re-roofing plans.

Insulated Systems

Metal building construction over the years has historically used low R-value insulation between the existing purlins and metal roofing. Because of this, these buildings may be ineffective in reducing heat gain through the roof assembly in the summer as well as heat loss during the winter months. Adding insulation between the old and new roofs is a cost-effective measure to decrease the building's energy consumption while paving the way to pay for itself in a relative short time frame.

The thickness of the insulation may vary dependent on code requirements, such as the ASHRAE 90.1-Model Energy Code. If the code requires a R-Value then the depth of the air-space allows when using a standard sub-purlin, it is very easy to increase the depth of the Roof Hugger to permit

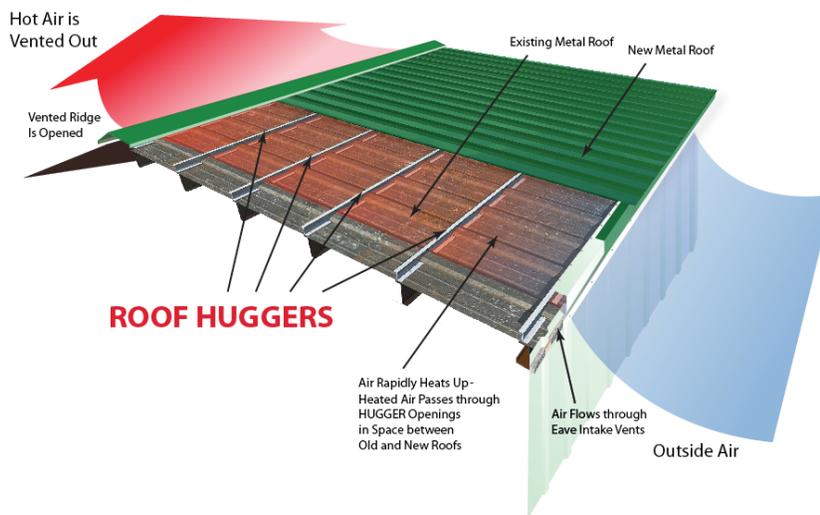
thicker insulation without adding major cost to the project.



Actual project case studies have illustrated up to 25% reduction in energy fuel source consumption for heated and air-conditioned buildings.

Ventilated Systems

If the building that is being retrofitted is not thermally controlled, then adding insulation may not be of benefit. If this is the case, then



the air-space should be ventilated. This is easily accomplished using economical ventilation products at the low eave and high point (ridge, high eave, etc.) of the roof. When ventilated, the air in the cavity becomes a radiant barrier that reduces heat gain/loss. This roofing technology is known throughout the metal

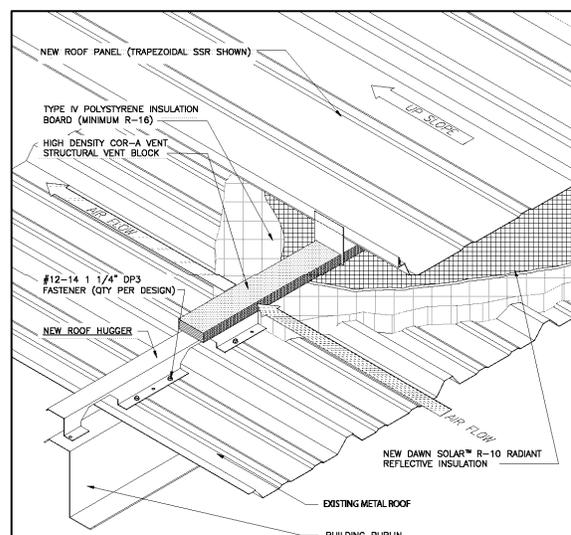
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roofing industry as Above Sheathing Ventilation or "ASV".

Please note that this assembly is very effective as well for buildings that are thermally controlled. Case studies for these systems have illustrated nearly 21% decrease in energy consumption. In warmer climates, this system is very effective in improving the building's interior environment. This is especially true for buildings that have working occupants such as livestock confinement, manufacturing and warehousing.

Ventilated and Insulated Systems

It is possible to incorporate both new insulation and ventilation in the cavity between the old and new roofs. In fact, building envelope industry experts claim this is the best of both worlds. To accomplish this, the thickness of insulation is determined and the Roof Hugger sub-purlins are then manufactured approximately two inches taller to permit air-flow above the insulation. Another technique can be used by installing a Cor-A-Vent strip atop the Huggers for systems using new standing seam metal roofs with tall clips.



If interested in learning more about these systems, contact Roof Hugger at (800) 771-1711 or you may visit the Metal Construction Association's (MCA) website at www.metalconstruction.org where additional information is available on energy efficient metal roof systems.