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Press Release

ASHRAE ACKNOWLEDGES METAL BUILDING U-FACTORS IN 90.1 STANDARD DO NOT REFLECT TYPICAL INSTALLATIONS, PROPOSES REVISED U-FACTORS FOR 90.1-2010 STANDARD

On January 12, 2010, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) published a press release acknowledging that the thermal performance representations in the 90.1-1999 through 90.1-2007 Standards for typical over-the-purlin, over-the-girt and sag-and-bag methods of insulating pre-engineered metal building roofs and walls do not reflect the performance of these assemblies as they are typically installed. The press release includes revised thermal performance representations that reflect typical installation practices that are proposed for inclusion in the upcoming 90.1-2010 Standard.

The 90.1 Standard is the commercial building reference standard for state building energy codes under the federal energy policy act. The purpose of the 90.1 Standard is to provide minimum performance requirements for the energy-efficient design of buildings. The revised metal building insulation assembly U-Factors announced by ASHRAE indicate that typical single layer laminated over-the-purlin methods do not comply with the maximum assembly U-Factor for non-residential metal building roofs in all climate zones for 90.1-1999 through 90.1-2007 Standards. Typical double layer “sag-and-bag” methods of installation require R-16+R-19 or R-19+R-19 configurations to comply with the maximum assembly U-Factor in most climate zones in the 90.1-1999 through 90.1-2007 Standards.

Roof Insulation System	U-Factor	Complies with 90.1-2007 Climate Zones 1-7 Maximum U-Factor: U-0.065	Complies with 90.1-2007 Climate Zone 8 Maximum U-Factor: U-0.049
R-19 Single Layer “over-the-purlin” (standing seam roof with R-3 thermal spacer block)	0.082	NO	NO
R-11+R-19 Double Layer “sag-and-bag” (standing seam roof with R-3 thermal spacer block)	0.072	NO	NO
R-19+R-11 Simple Saver System® (standing seam roof with R-3 thermal spacer block)	0.035	YES	YES
R-19+R-11 Simple Saver System® (thru-fastened roof without a thermal spacer block)	0.044	YES	YES

Industry Published Inflated U-Factors

During the investigation into the metal building assemblies in the 90.1 Standard, representatives from various companies and organizations in the metal building industry objected to any revisions of these U-Factors, claiming that the U-Factors were correct but that the products were not being installed properly. Thermal Design vigorously and successfully defended the contractors and erectors that were being blamed for what was clearly a problem with the inflated U-Factors published and defended by these same industry representatives. As a result, ASHRAE has now proposed these revised U-Factors for the 90.1-2010 Standard which reflect the thermal performance of these assemblies as they are typically installed.

Complying With The Intent Of The Code

All architects, engineers, contractors, erectors, code compliance officials and owners should be aware of these revised U-Factors to ensure that the buildings they design, build, inspect and occupy actually comply with the intended minimum thermal performance requirements of current energy codes. Thermal Design will assist any of these individuals in complying with the minimum energy code requirements and design goals of their projects. Our patented Simple Saver System® liner system can be installed in both standing seam and thru-fastened metal building roofs to safely and economically exceed the most stringent metal building roof thermal performance requirements in all current versions of the 90.1 Standard.

Contact your Thermal Design representative at 800-255-0776 to answer questions and assist with your next metal building. For more information, including a copy of ASHRAE's January 12th, 2010 press release, visit our website at www.thermaldesign.com.

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Thermal Design, a recognized innovator in the insulation industry, creates effective insulation solutions based on easy-to-install building systems, accessories and concepts. Based in Madison, Nebraska, Thermal Design is a nationwide company that develops and manufactures the patented Simple Saver System®, delivering designed in-place R-values and OSHA-accepted fall protection for pre-engineered metal buildings.