Scott Springfield Mfg. Inc.

R– Value Alone, Does Not Equal Energy Savings

HVAC Matters

Building Owners and Facilities Managers are consistently concerned with the quality of their HVAC equipment as it affects lifecycle cost, maintenance and safety. Quality of construction and design ensures low air leakage, hygienic indoor air quality (IAQ) and minimized energy usage.

R-Value Alone, Does Not Equal Energy Savings

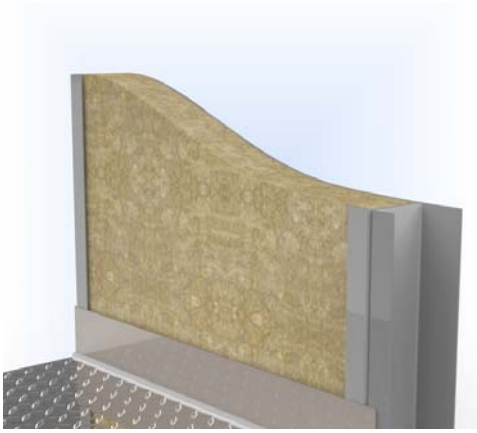
R-Value is the ability of an insulating material to resist heat transfer. However, when applying insulation practices in air handlers, a high R-value doesn't necessarily result in an energy efficient unit. ***Energy savings are realized when you address air leakage from cabinet construction, thermal effectiveness as well as energy consumption and system design.*** These factors combined, maximize energy efficiency.

Superior Insulation

Unlike manufacturers who use foam or fiberglass insulation in wall and door panel construction, Scott Springfield uses mineral wool insulation for far greater bottom-line performance. Mineral wool is an excellent insulator, has a high burn resistance (2150^{o}F flashpoint) and does not off-gas or shed. Additionally, mineral wool can absorb up to 25% more sound than foam insulation, helping to reduce or eliminate costly sound attenuation. This results in higher IAQ as well as increased human comfort within the occupied area.

Low-Leakage Construction

Inadequate cabinet construction is the largest contributor to wasted energy and increased operational costs.



Mineral Wool Insulation provides:

- **High R-Value**
- **Higher IAQ**
- **25% better sound attenuation**
- **Fire resistance**
- **No off-gassing**
- **Organic material**
- **Regulated, proven technology**

Scott Springfield's Rigid Wall Technology™ delivers a 50% reduction in leakage when compared to modular or panelized construction methods. Manufacturers who use a modular or panelized construction method are typically rated as Class 6 leakage rates whereas Scott Springfield's air handlers can achieve ratings as low as Class 2. [1]

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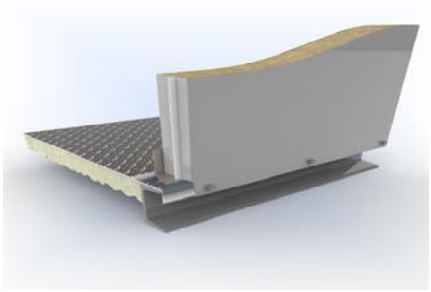
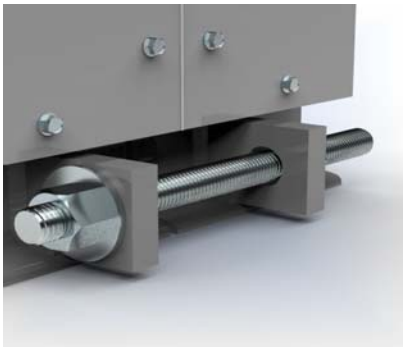
[1] *Rating by Ashrae / SMACNA Classification*

Superior to a tek screw or a bolted method of construction, **Rigid Wall Technology™** sections are mechanically attached through a clinch construction method to reduce air leakage and ensure walls are strong enough to sustain the most rugged environments.

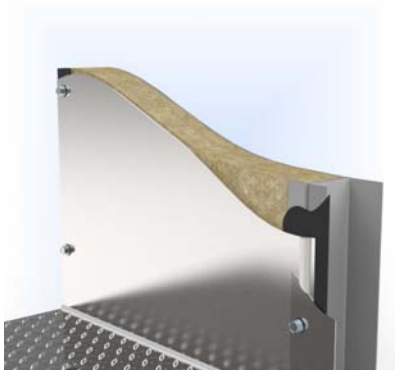
A common practice in manufacturing of air handlers is to stitch weld and caulk the flooring sections. This can wear over time leading to the expensive replacement of breached floors and the potential for leakage into occupied spaces. Scott Springfield's specialized engineering and construction technique uses robotically seam-welded flooring to eliminate air and water leakage. All components, such as large fans, are welded to the floor to eliminate floor penetrations. ASTM welded steel framing and base construction ensures the integrity of the air handler throughout the shipping and installation process.





When on-site unit assembly is required due to shipping splits, Scott Springfield's structural split design combined with our **Split Lock Assembly System** can reduce installation time and costs by up to 50%.

Thermal Performance & Efficiency



Thermal effectiveness in an air handler considers two factors: the temperature transfer between cold and warm areas of the wall casing and the air leakage rate of the unit. Thermal break eliminates the flow of thermal energy between the inner and outer casing of the walls. When incorporated into an air handler, it minimizes or eliminates condensation (sweating), frost or heat escape while maintaining thermal performance. Commonly used plastic connections between wall panels results in a less rigid construction, UV fatigue, air leakage and degradation of seals. Plastic connections experience a shorter life-cycle as a result of temperature fluctuations within the unit and environment. **Scott Springfield's Rigid Wall Technology™** incorporates thermal isolation barriers to eliminate thermal transfer between the inner and outer walls. Doors feature a complete dual-seal design to eliminate thermal transfer.

In summary, it's not only the insulation that will give you an energy efficient unit. The design and construction techniques used in building the air handler are critical. Remember, you must temper the air inside the unit for every bit of air that leaks from the unit – that's where energy dollars are wasted.

The Scott Springfield Custom Air Handler Advantage

Experience how design and high quality construction can maximize HVAC performance, reduce operating costs, enhance IAQ, and deliver a product that will exceed your expectations.

Scott Springfield Custom Air Handlers are designed for application specific operating environments, to meet the highest standards in thermal, acoustical and leakage performance. Scott Springfield's quality of construction ensures an extended product lifecycle and reduced maintenance requirements while reducing on-site assembly time and installation costs.

Scott Springfield is an ISO-9001 certified manufacturer that brings domestic and international customers quality air handling equipment at competitive rates. From hospitals to manufacturing plants to the most rugged industrial applications, our engineered design brings you peace of mind and maximized performance.

For more information about Scott Springfield Custom Air Handlers for commercial and industrial applications, or to schedule a factory tour, email sales@scottspringfield.com or call (403)236-1212.

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