



ESJ™
ENERGY SAVER

FOR NEW CONSTRUCTION



If it's important to you. It's important to us!

We strive to provide an exceptional customer experience on every order.



SALES AND TECHNICAL SUPPORT

- Customer Specific Support
- Building Code Experts



SERVICE

- Centralized Operations
- Energy Code Compliance



QUOTING TOOL

- 24/7 Online



RESEARCH AND DEVELOPMENT

- Silvercote Envelope Solutions
- New and Improved Systems and Accessories
- Customer Training

BEST IN CLASS MATERIALS

- Certified Formaldehyde Free Ecosse Technology



Our Mission

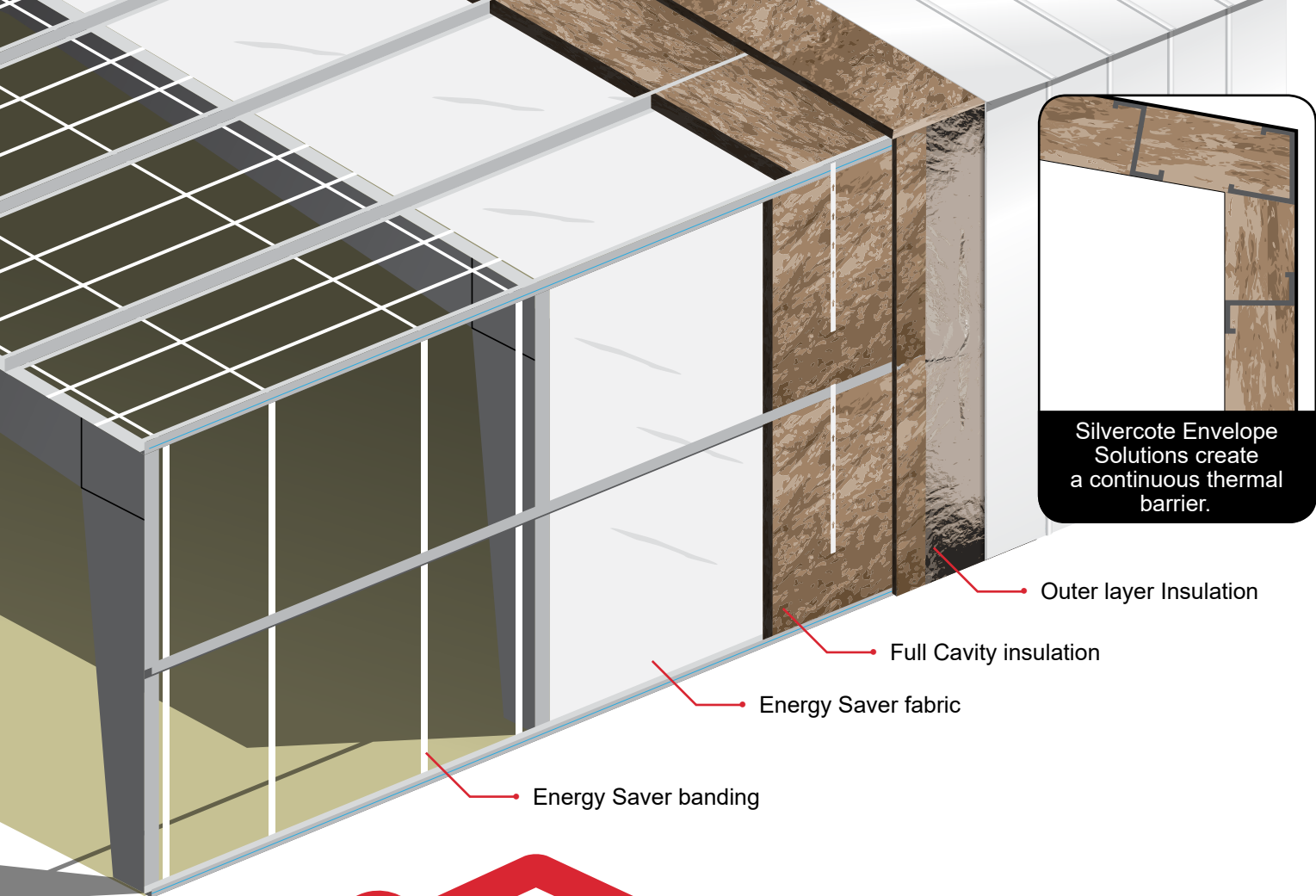
Silvercote designs custom insulation solutions that create value for our customers, employees and shareholders. We empower our employees to deliver what we promise to drive success.



For more than 80 years Silvercote has partnered with customers in the metal building industry to provide innovative custom insulation solutions and systems.

Silvercote is part of the Distribution International (DI) family of companies. Founded in 1986 Distribution International is a value-added distributor of insulation-related specialty fabricated products, HVAC products, and safety supplies in North America.

Please contact us for more information (844) 232-3701 or info@silvercote.com



Why Silvercote developed envelope solutions.

Industry wide challenges in meeting increasingly stringent building codes are the driving force behind Silvercote Envelope Solutions for Energy Saver™. Energy Saver is designed to provide optimal overall energy performance for your building.

We want to make complex building designs simple. We provide custom fabricated insulation and fabric, but also all necessary accessories and components to install your project correctly the first time.

We strive to provide customized insulation to meet for your specific project needs.

Energy Saver is the optimal Silvercote Envelope Solution!

- Our premier system can meet or exceed IECC 2015 energy code requirements
- Provides a clean and finished appearance of roofs and walls by hiding the purlins and girts
- Improves acoustical performance compared to no insulation
- When installed to Silvercote's specifications provides a barrier to air leakage and contributes to a better airtight building
- Silvercote's fabric welding technology creates a continuous single custom sized fabric

What is Energy Saver?

Energy Saver can provide our highest R-value roof and wall envelope insulation system for new construction. It consists of a network of banding straps, a bright interior support fabric and unfaced ECOSE® glass mineral wool insulation creating a total building envelope. The Energy Saver system is designed primarily for use in metal buildings, but can also be used in the roof and wall for other types of building construction.

Energy Saver FP provides OSHA-compliant leading edge fall protection. The roof system fabric is installed under the roof secondary structure and is supported by a banding grid system. ECOSE glass mineral wool insulation is installed in varying thickness between and across the purlins to obtain the desired insulating values.

The Energy Saver wall system is offered in a single or double layer ECOSE glass mineral wool insulation system. Fabric is installed in the interior resulting in a bright finished wall appearance.



Improve productivity

71 percent of office workers list noise as a key impediment to productivity. In fact, noise pollution is a major environmental problem and exposure to excessive noise causes stress, poor concentration, productivity reduction, fatigue and loss of psychological well-being. ECOSE glass mineral wool insulation in walls, ceilings, floors and ducts significantly reduces the amount of noise inside buildings.

Use Energy Saver Envelope in:

- Manufacturing facilities
- Aircraft hangers
- Sports arenas
- Retail locations

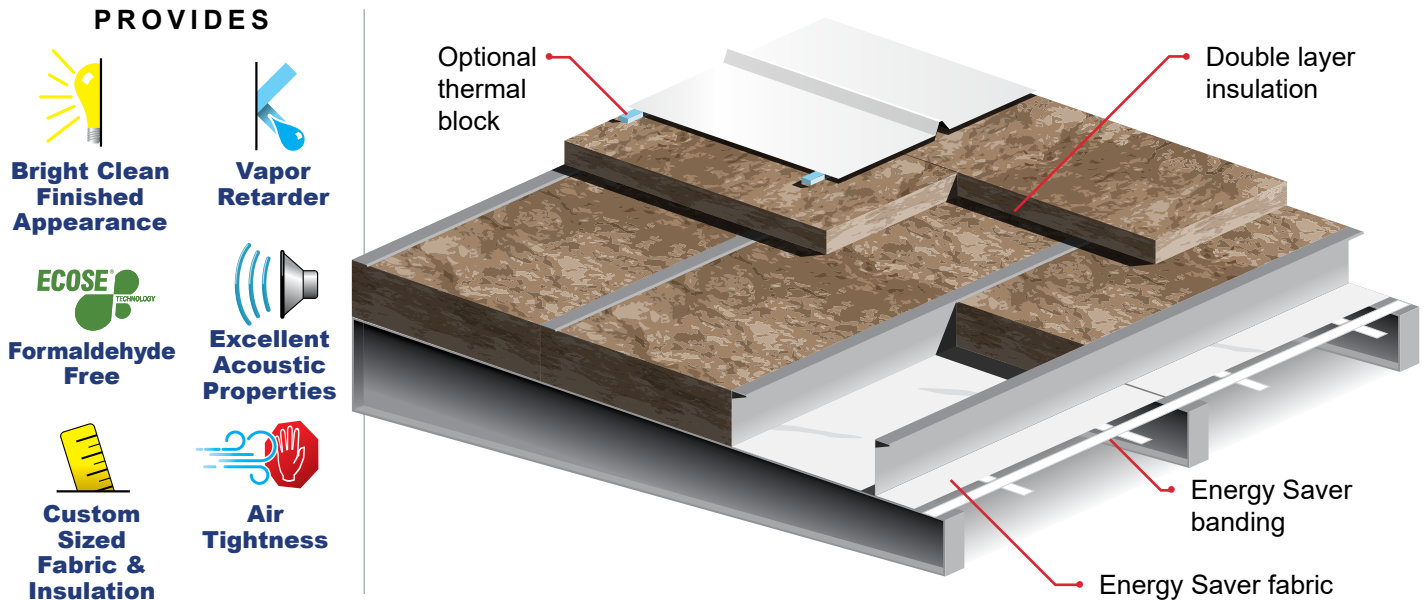
Insulation products, specifically wall and ceiling insulations also reduce noise transfer from one room to another.



Energy Saver Roof

Energy Saver FP™ (OSHA-compliant leading edge fall protection) roof system fabric is installed under the roof secondary structure and is supported by a banding grid system. Unfaced glass mineral wool insulation is installed between and above the purlins in varying thickness combinations to obtain the desired insulating values.

- Provides a continuous vapor retarder
- Our Energy Saver fabric welding process produces seams that exceed the ASTM-D-751 Standard of the fabric itself
- Free online, Energy Saver Roof Fall Protection system training available





OSHA-compliant leading edge fall protection for roofs

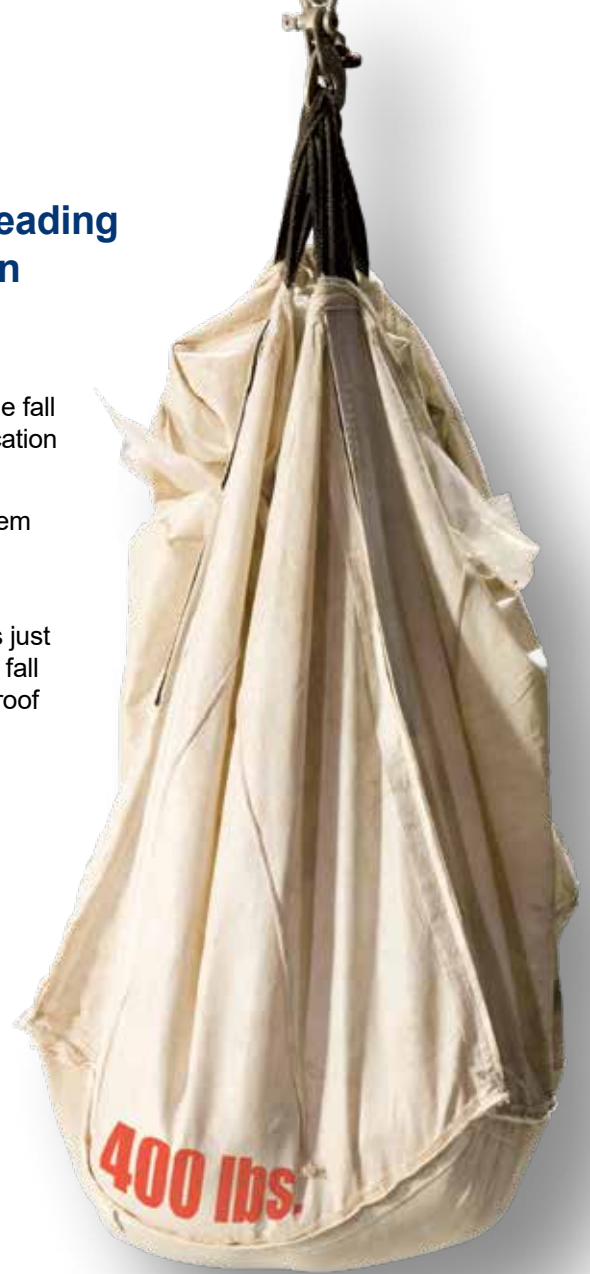
Energy Saver FP protects the installation crew while the building is being insulated and roofed by providing OSHA-compliant leading edge fall protection when installed by a Silvercote certified contractor. Our certification is free and can be completed at silvercote.com

To meet OSHA guidelines, an insulation support and fall protection system must restrain and support 400 pounds dropped from at least 42" above the highest walking or working surface.

Energy Saver FP provides fall protection at the leading edge only and is just one component of a total fall protection plan for the job. Other means of fall protection are still required within six feet (6') of any exterior roof edge, roof opening or common rafter where the system has not been completely installed in both bays.

Tensile strength testing –

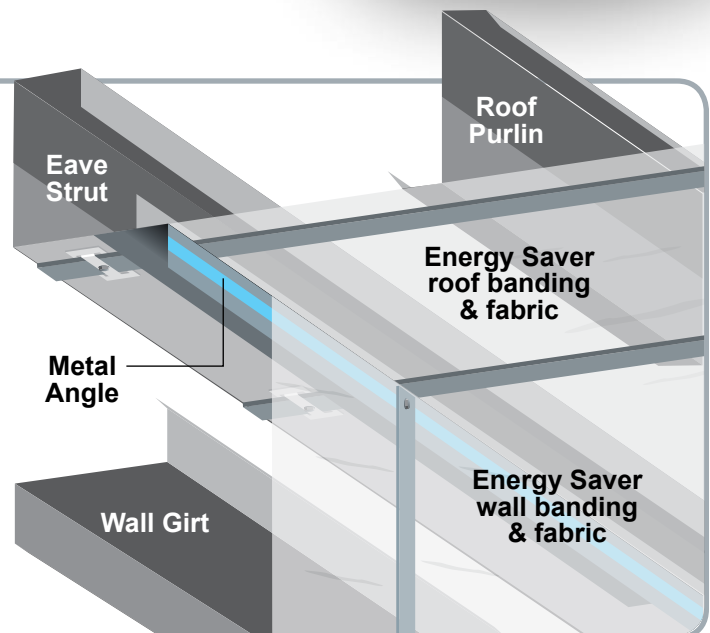
We conduct daily testing on actual production samples of welded Energy Saver FP fabric to ensure your safety. Production samples must exhibit a seam strength of more than double the required failure strength to meet our standards and be considered acceptable for use in our roof Energy Saver FP system.



IT'S IN THE DETAILS

There are many different connection needs based on manufacturer specifications for your building. A secure connection must be made around the entire perimeter and each penetration of the Energy Saver fabric to create a sealed envelope.

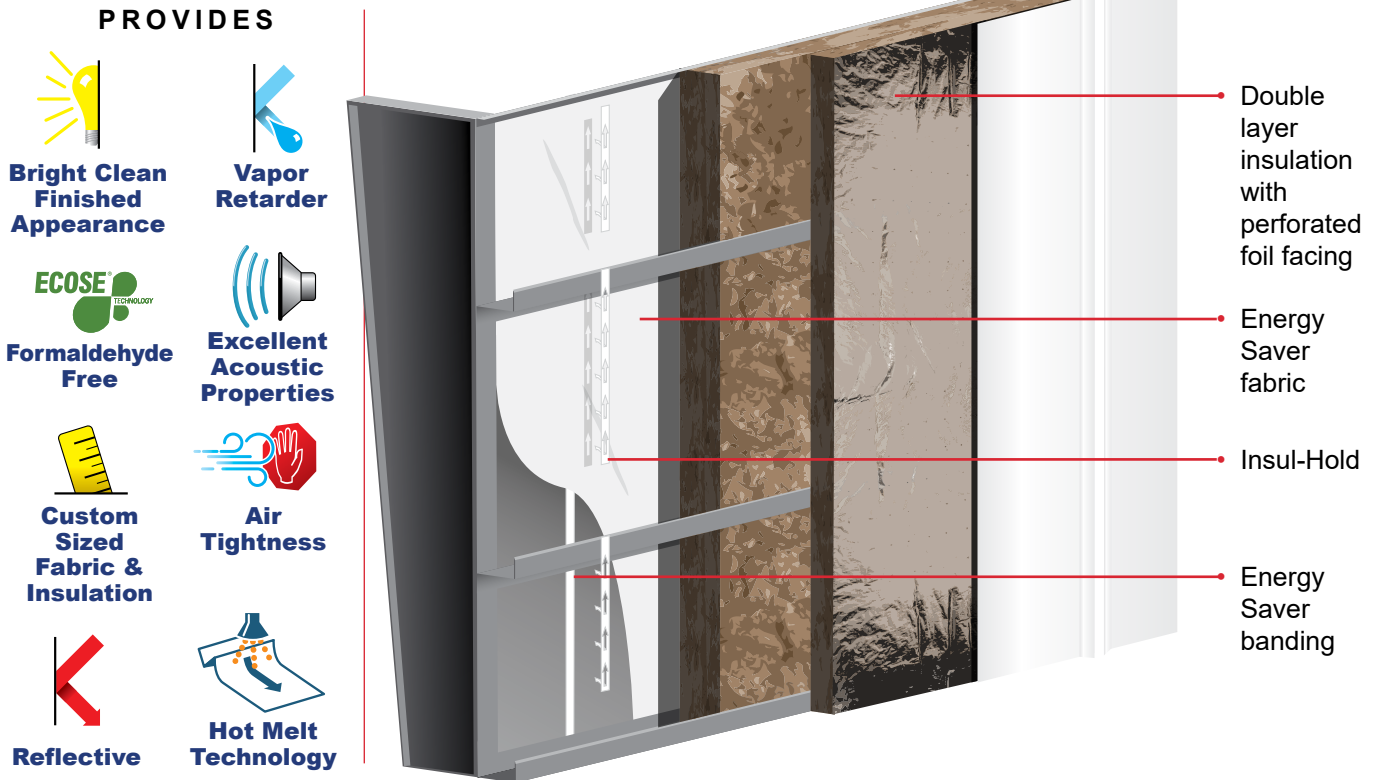
Silvercote provides specifications for many standard connections. **See the Energy Saver Install Instructions at Silvercote.com for specific details.**



Double Layer Wall System

An unfaced glass mineral wool insulation layer is used to fill the girt cavity. A second layer of foil laminated glass mineral wool insulation layer creates the thermal barrier needed to meet today's energy codes.

- Maximizes R-value with cavity filling system that provides excellent thermal properties with an additional external perforated faced layer of insulation
- Reduced air-infiltration
- Our Energy Saver fabric welding process produces seams that exceed the ASTM D-751 Standard of the fabric itself
- Insul-Hold (hangers) retains the insulation in proper cavity location
- Unique hot melt lamination technology virtually eliminates wrinkles



Why we recommend horizontal installation?

When installing the full cavity insulation horizontal installation provides:

- Fewer seams reduces possibility of cold bridging
- Reducing field cutting of insulation decreases labor costs
- Custom widths available
- Works with single or double layer

Vertical installation provides:

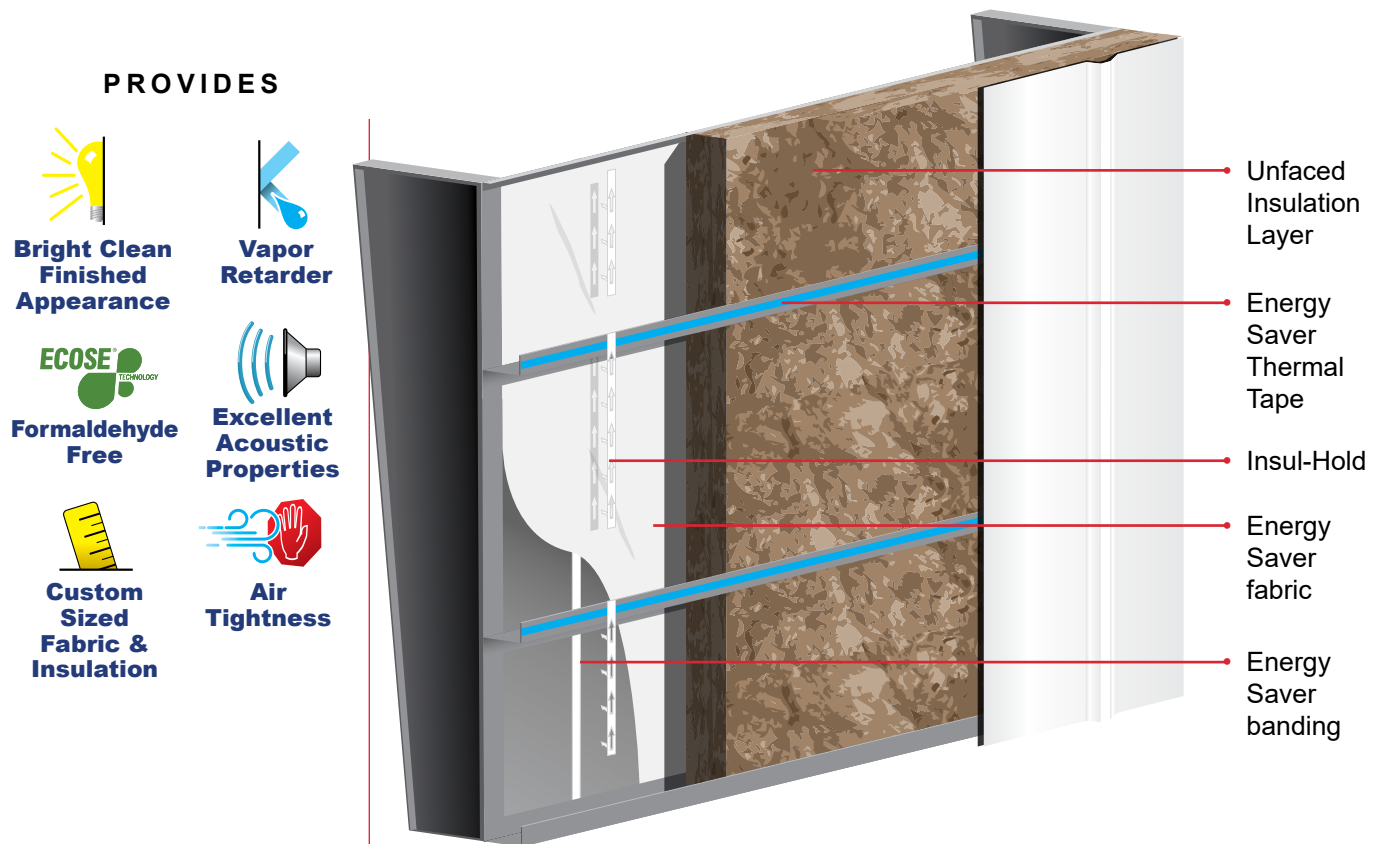
- Works with all girt spaces
- Works with single or double layer



Single Layer Wall System

Unfaced glass mineral wool insulation is available in multiple thicknesses to fill the wall girt cavity.

- Our Energy Saver fabric welding process produces seams that exceed the ASTM D-751 Standard of the fabric itself
- Use of Insul-Hold retains the insulation in proper cavity location
- Energy Saver Foam Tape provides a limited thermal bridge effect



Providing a thermal break

Energy Saver Thermal Tape provides a thermal separation between the exterior metal panels and the building structural. This helps to prevent temperature transfer and condensation through the metal to the interior of the building. Supplied in 50' long rolls it is adhesive backed for easy application. It is recommended that it be applied to all secondary steel or girts with direct contact to the exterior panels.



Why we recommend a double layer system?

When selecting a high R-value system it is imperative to use two layers. In roofs the top layer is perpendicular to and above the purlins minimizing the chance of sag which could potentially cause a void within the roof cavity and increase the potential for condensation. The bottom layer is used to fill the purlin cavity providing maximum energy efficiency. For the walls, as in roofs, the outer layer is perpendicular to the girts and minimizes the chance for condensation. The inner layer fills the wall girt space.

Single layer systems, while acceptable, are not as efficient and require a thermal break.

Double Layer Roof



Full Cavity
No Visible
Purlins



Double Layer Wall



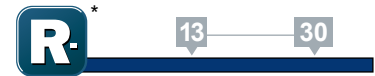
Full Cavity
No Visible
Girts



Single Layer Wall



Full Cavity
No Visible
Girts



* It is important to completely fill the purlin/girt cavity. Contact your Silvercote Sales Representative for the best combination for your individual project.

ECOSE glass mineral wool insulation

Our glass mineral wool insulation is available with ECOSE Technology binder. ECOSE Technology

insulation products deliver the same exceptional quality, handling and durability you have come to expect and is Formaldehyde Free!

It is certified to the toughest indoor air quality certification in the industry - GREENGUARD Gold - and is certified to meet CHPS Low-Emitting Materials criteria section 01350.



R-Value*	Nominal Thickness
R-8	2 5/8"
R-10	3"
R-11	3 1/2"
R-12	3 1/2"
R-13	4"
R-19	6"
R-20	6"
R-21	6 3/4"
R-25	8"
R-28	8"
R-30	9 1/2"

Outside
layer wall
maximum

* Preinstalled values

Silvercote Offers NAIMA Certified Glass Mineral Wool Insulation

NAIMA 202.96® Certified Fiber Glass Metal Building Insulation is produced in a special manufacturing process to give it the structural integrity it needs to recover to full thickness after lamination, shipping and installation. This standard is a valuable specification tool for manufacturers, designers and users of metal building insulation systems.

NIA 404 Certification is a post-lamination certification for flexible fiberglass insulation used in metal buildings. This certification assures builders and building owners that the fiberglass insulation specifically engineered for metal buildings meets 100% of the stated R-value after the lamination process.



COMcheck™ Solutions

Your Silvercote sales representative can provide help to meet your energy code compliance.

“The COMcheck product group makes it easy for architects, builders, designers, and contractors to determine whether new commercial or high-rise residential buildings, additions, and alterations meet the requirements of the IECC and ASHRAE Standard 90.1, as well as several state-specific codes. COMcheck also simplifies compliance for building officials, plan checkers, and inspectors by allowing them to quickly determine if a building project meets the code.”

U.S. Department of Energy

Hot Box Testing

ASTM C1363-11 – Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by means of a Hot Box Apparatus.

To accomplish this test, a box is outfitted with sensors that accurately measure the rate at which heat flows through a building assembly (roof or wall). The corresponding data is presented in the form of a “U-factor.”

U-factors

DOUBLE LAYER ROOF*

R-25 + R-8 0.035
8” Z purlin
1” EPS spacer block
standing seam roof

R-30 + R-8 0.0299
10” Z purlin
1” EPS spacer block
standing seam roof

* NAHB research center in Richmond, VA.
** ASHRAE. ^ Minimum R-3 thermal spacer block is required.

SINGLE LAYER WALL**

Rated insulation R-value	U-factor for base wall assembly
R-25	0.059
R-30	0.052

DOUBLE LAYER WALL**

Rated insulation R-value	U-factor for base wall assembly
R-25 + R-10	0.047
R-25 + R-16	0.042
R-25 + R-10^A	0.039
R-30 + R-16	0.039

LEED Eligible Glass Mineral Wool Insulation

- Optimized energy performance
- Reduced demand for virgin materials
- 80% recycled content
- Use of regional materials
- Incorporating rapidly renewable materials
- Improved air quality
- A comfortable thermal environment
- High performance acoustic properties



Save more than energy

Did you know that insulation saves commercial building owners more than \$9.6 billion in energy costs annually?

Insulation also reduces annual energy use in U.S. buildings by 12 quadrillion BTUs, roughly 15 percent of total U.S. annual energy usage. It also diminishes power plant emissions, cutting carbon dioxide by 780 million tons annually. (The figures include both commercial and residential buildings and are taken from the study "Green and Competitive: The Energy, Environmental and Economic Benefits of Fiber Glass and Mineral Wool Insulation Products.")

According to the U.S. Department of Energy, one third of the energy used in commercial buildings is devoted to heating and cooling. That's why it makes good business sense to maximize the glass mineral wool insulation in your building(s) to achieve greater energy savings and reduce heating and cooling loads.

Of course this is just the tip of the iceberg. There are layers of benefits to adding glass mineral wool insulation in commercial buildings - from increased energy savings, temperature and condensation control to noise reduction and environmental sustainability.



Architects

We know how important aesthetics, acoustical properties and thermal performance are for your clients. Energy Saver systems provide a clean, bright finished ceiling for maximum lighting efficiency and meets or exceeds the IECC 2015 energy codes with unlimited R-value capability.



Metal Building Manufacturers and Owners

You can have confidence in Energy Saver's longevity and durability. Energy Saver systems are engineered to last – just like your metal buildings. Energy Saver's full cavity envelope creates a continuous thermal shield to make sure you get the maximum return on your investment.



Contractors and Installers

We know how important safety is on the jobsite. Energy Saver FP meets OSHA-compliant leading edge fall protection standards. We make it easy for you and your crew to install by using our simplified instructions. Free online, Energy Saver Fall Protection system training available.

Energy Saver Envelope Components and Accessories

Insulation – Our metal building insulation is available with formaldehyde free ECOSE Technology binder, which is GREENGUARD Gold certified. Our glass mineral wool insulation features an FHC 25/50 flame spread and smoke developed rating per ASTM E84 Standards. This superior glass mineral wool insulation can be cut to width for your building specifications.

Fabric – Energy Saver fabric is a woven reinforced high-density polyethylene yarn, then coated on both sides with a continuous white or colored polyethylene coating. Our fabric provides a bright and durable interior finish. It is folded to allow for rapid pullout onto the banding grid and features an FHC 25/50 rating per ASTM E84 Standards.



Color	White/grey
Weight	4.4 oz/yd ² (149g/m ²) +/- 5 %
Thickness	Nominal 9 mil (0.22 mm) ASTM D1777
Grab Tensile	Warp 130 lb 577 N / Weft 155 lb 510 N, ASTM D-5034
Strip Tensile (N/5cm)	Warp 95 lb/in (843)/Weft 90 lb/in (799), ASTM D-5035
Tongue Tear	Warp 50 lb 222 N / Weft 45 lb 200 N, ASTM D-2261
Mullen Burst	235 psi 1619 kPa, ASTM D-3786
Moisture Vapor Transmission	0.02 perms, ASTM E-96
Surface Burning Characteristics	Flame Spread: 0, Smoke Developed: 30 (white side exposed) UL723 (ASTM E84)
UV Weathering	UV stabilizer added for Extra UV resistance

Note: These are manufacturer supplied property values and are intended as guides only. The figures listed do not represent specification minimums or limits.

Energy Saver Adhesive – Our specially designed high shear and high tack adhesive bonds the fabric to the steel framing.

Energy Saver Patch Tape – Designed to mimic the appearance of the Energy Saver fabric our patch tape is used to seal cuts around protrusions.

Energy Saver Foam tape – Applied to the outer secondary steel to help reduce heat transfer.

Energy Saver Banding – The banding provides abundant support for the Energy Saver components while contributing properly designed strength characteristics necessary to pass the rigorous 400 pound drop test (as per OSHA 1926.502) for Energy Saver FP.

Energy Saver Banding Clips – United States Patent 8,015,769.

The banding clips provide a clean, finished appearance, while minimizing the number of fasteners required.

Insul-Hold – Used to support our glass mineral wool insulation in the wall girt cavity. Unlike other products, they can be cut to length to fit the metal frame.

OSHA-compliant leading edge fall protection – The Energy Saver FP system provides OSHA-compliant leading edge fall protection when installed according to manufacturer's instructions by a Silvercote certified installing contractor. Energy Saver FP is fall protection at the leading edge only and is only one component of a total fall protection plan for the job. Other means of fall protection are still required within six feet (6') of any exterior roof edge, roof opening or common rafter where the system has not been completely installed in both bays. Contact your Silvercote sales representative or see the Energy Saver FP Contractor Agreement and installation instructions for more details. Certification is available online at silvercote.com.

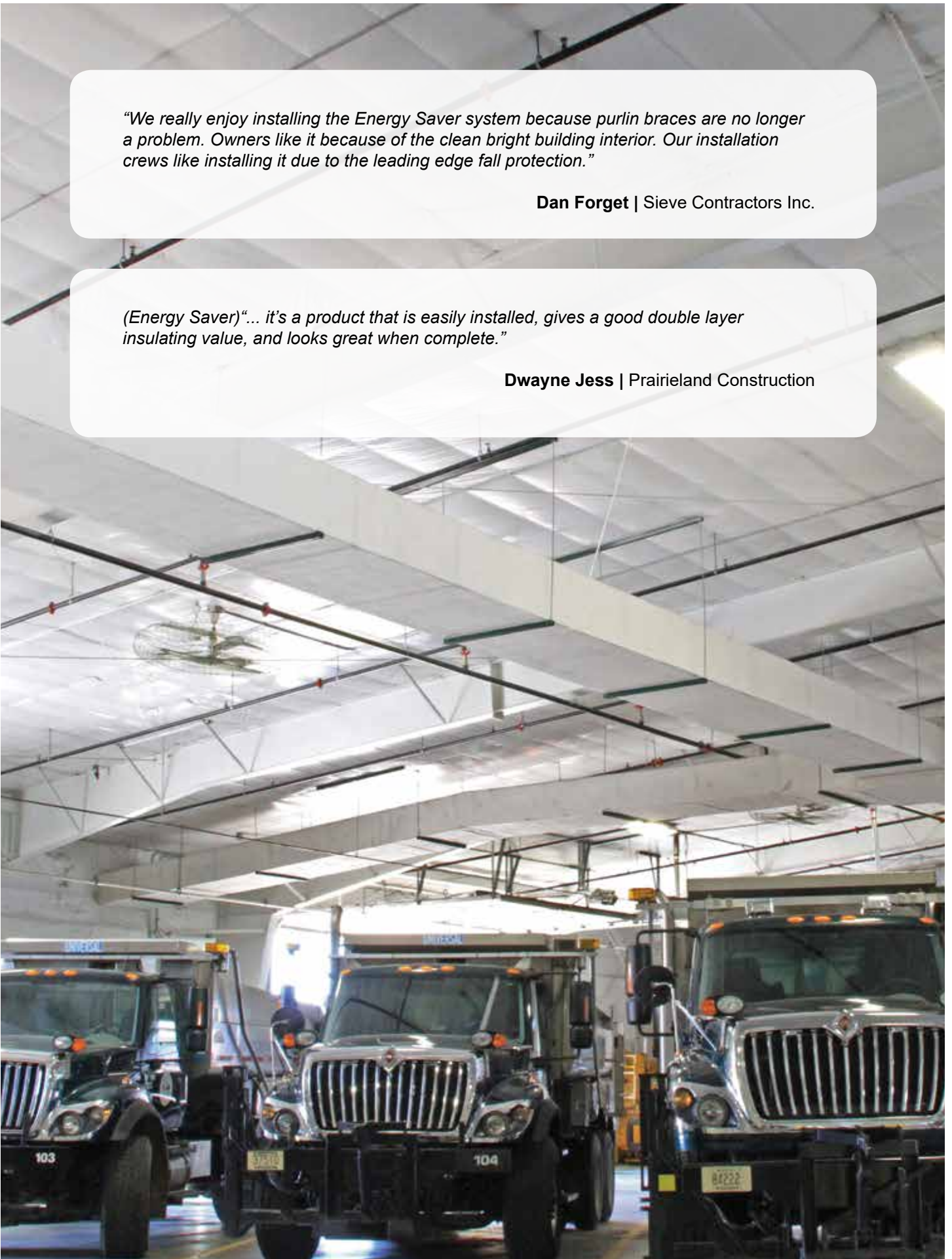
Note: As per Energy Saver certification OSHA-compliant leading edge fall protection with this system, install only Energy Saver components and accessories that are sent with your order.

"We really enjoy installing the Energy Saver system because purlin braces are no longer a problem. Owners like it because of the clean bright building interior. Our installation crews like installing it due to the leading edge fall protection."

Dan Forget | Sieve Contractors Inc.

(Energy Saver)"... it's a product that is easily installed, gives a good double layer insulating value, and looks great when complete."

Dwayne Jess | Prairieland Construction





Please contact your Silvercote Sales Representative
for more information at (844) 232-3701 or info@silvercote.com