



PROVEN
SOLUTIONS
FOR RE-ROOFING
METAL ROOFS

ROOF HUGGER[®]

Over 80 Million Square Feet Installed Since 1991

What Is Metal-over-Metal Re-roofing?

Simply put, Metal-over-Metal Re-roofing is the installation of a new long-life metal roof without removing the existing metal roof in a structurally correct, non-disruptive and cost effective manner.



Manufacturing Plant

40,500 S.F.
Millville, NJ

Texas School Project Re-roofed using Roof Hugger Vertical Rib Sub-purlins.



Boat Manufacturing Facility

Receiving New Standing Seam Metal Roof
and Solar Thermal Hot-Water System.

Benefits of Metal-over-Metal Re-roofing

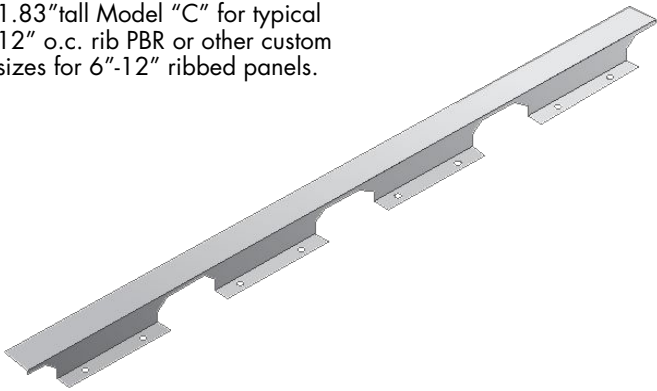
- No more roof leaks
- No business interruption
- Significant time and money savings
- 60-Plus year new roof service life, lowest lifetime cost
- Allows easy upgrade from screw-down roof to standing seam roof
- Increased building value
- Increased energy efficiency and reduced power consumption
- Comply with current and stringent building codes
- Labor savings, fast project completion
- Perfect platform for adding renewable solar energy systems

Roof Hugger Retrofit Sub-Purlins are zee-shaped structural members that are typically 10 to 12 feet in length. They are made from minimum 16-gauge, high strength, galvanized steel and specifically notched to fit over the ribs of the existing metal roof panels. **This factory notching provides a correct "structure to structure" connection with the least possible increase in assembly height.**

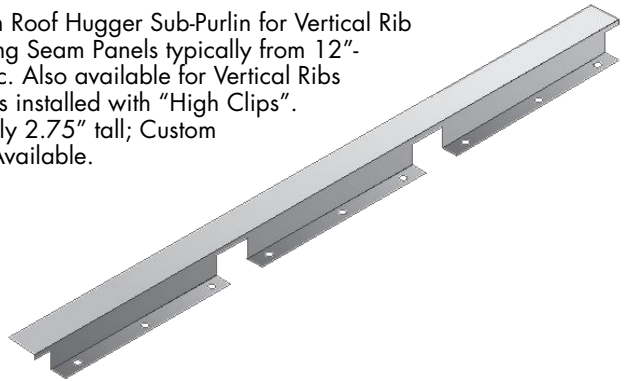
In addition, our systems add strength to the existing roof system thus assisting in offsetting the added weight of the new Metal-over-Metal roof components. **Roof Hugger sub-purlins can be fabricated for almost any existing metal roof panel profile including screw-down and standing seams and up 10 inches tall to accommodate for added insulation between the old and new roofs.**

Roof Hugger Sample Products

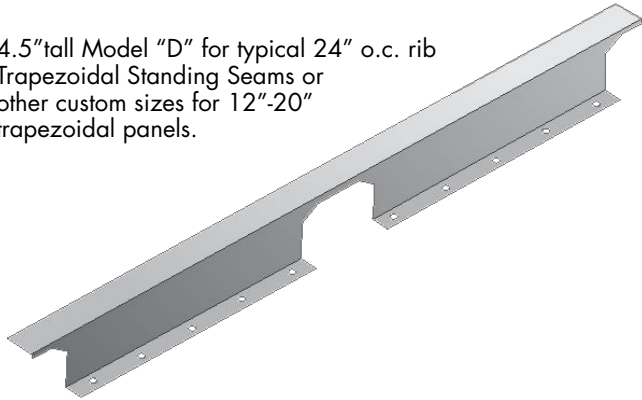
1.83" tall Model "C" for typical 12" o.c. rib PBR or other custom sizes for 6"-12" ribbed panels.



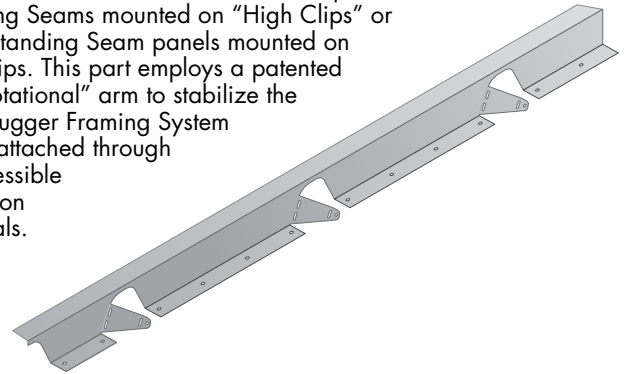
Custom Roof Hugger Sub-Purlin for Vertical Rib Standing Seam Panels typically from 12"-20" o.c. Also available for Vertical Ribs Systems installed with "High Clips". Typically 2.75" tall; Custom Sizes Available.



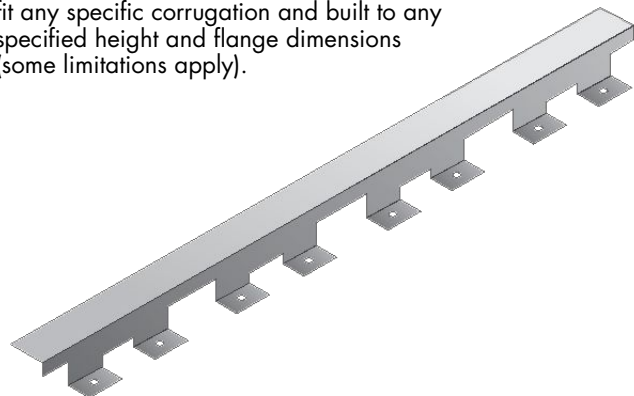
4.5" tall Model "D" for typical 24" o.c. rib Trapezoidal Standing Seams or other custom sizes for 12"-20" trapezoidal panels.



4.5" tall Model "T" for 24" o.c. rib Trapezoidal Standing Seams mounted on "High Clips" or other Standing Seam panels mounted on high clips. This part employs a patented "anti-rotational" arm to stabilize the Roof Hugger Framing System that is attached through compressible insulation materials.



Custom size Roof Hugger Sub-Purlin made to fit any specific corrugation and built to any specified height and flange dimensions (some limitations apply).



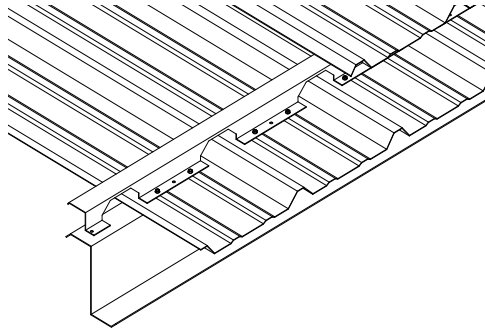
Our factory-notched sub-purlins can be fabricated to adapt to most panel rib spacing and height, special roof conditions or specific depths of new insulation. Refer to page 7 for more information

Roof Hugger Sub-Framing Solutions For Any Metal Roof

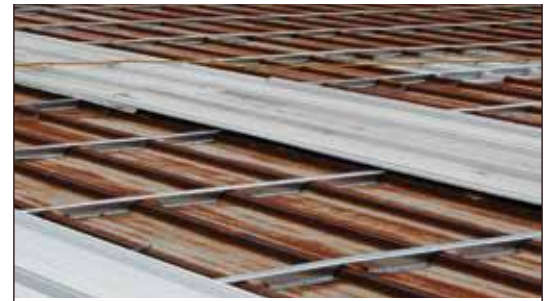
"R" Panel Over "R" Panel

The 12" o.c. ribbed "R" Panel is the most common existing panel on older metal buildings. Roof Hugger mass-produces a part that will fit most but not all existing "R" panel roofs. This part is an inventory item ready for immediate shipment.

Thermal efficiency can be increased by ventilating the new cavity. Insulation can also be added. Taller Huggers are custom-produced for increased new insulation depth.



R-Panel over R-Panel

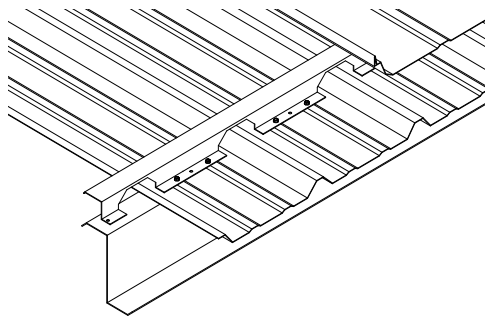


Trapezoidal Standing Seam installed over "R" Panel

Upgrading to a Standing Seam Roof?
Did you know that you cannot remove an existing screw-down roof and install a new standing seam system without installing major purlin bracing?

Standing Seam Over "R" Panel

Another typical installation is a new standing seam panel roof installed over an old screw-down roof system. This upgrade eliminates the problems inherent with thru-fastened panels. Leaving the existing roof in place also eliminates the need for major bracing modifications to the existing purlin system to make it suitable for installing a new standing seam roof.



Standing Seam over R-Panel

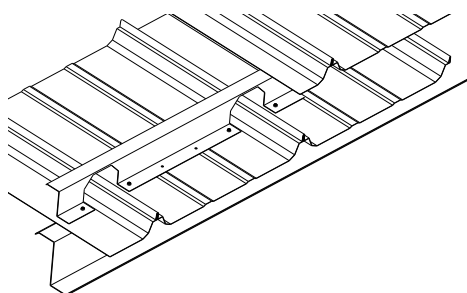


Vertical Rib Standing Seam over "R" Panel

Install ROOF HUGGERS over the old roof and eliminate the cost of bracing the existing purlins.

Standing Seam over Standing Seam

There are two major existing standing seam panel types: vertical rib and trapezoidal rib. Their rib spacing's vary from 12" to 30". Roof Hugger can produce a part to fit any existing standing seam profile to make retrofitting these roofs fast and easy.



Standing Seam Over Trapezoidal Standing Seam



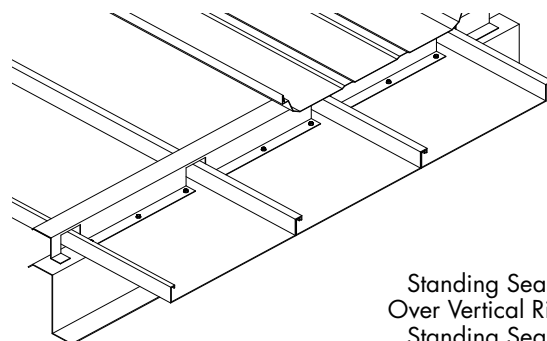
A trapezoidal standing seam roof being installed with optional insulation over an old trapezoidal standing seam roof.

Standing Seam Roofs With or Without Thermal Blocks

Roofs with standoff clips and/or thermal blocking require special Huggers and fasteners. Tell Roof Hugger if you have that condition to assure correct design and pricing (see Special Construction Solutions on page 7).



Vertical rib standing seam roof being installed over an old vertical rib standing seam roof.



Standing Seam Over Vertical Rib Standing Seam



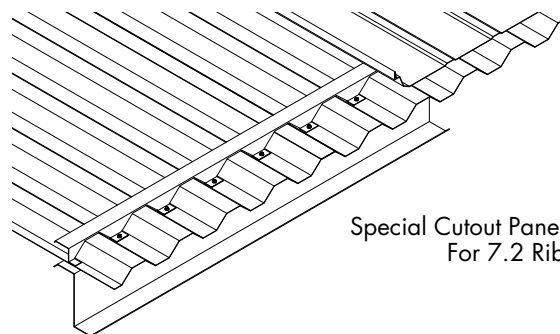
Special Height Roof Huggers.

Special Size Roof Huggers are NEVER a Problem!

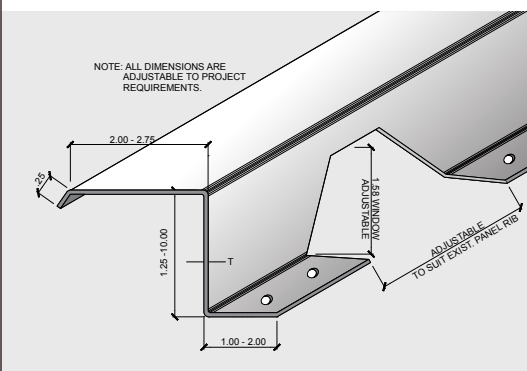
Roof Huggers are made from 16 ga., .060" min., high strength, 50 KSI galvanized steel and produced by automatic computer controlled punching equipment. This allows us to easily control the flange size, opening sizes and spacing.

All dimensions can be specified individually to suit project needs.

If you have a special condition such as adding a specific depth of rigid or fiberglass insulation; or a larger top flange for a special clip... just let us know, we can produce exactly what you need!



Special Cutout Panel For 7.2 Rib



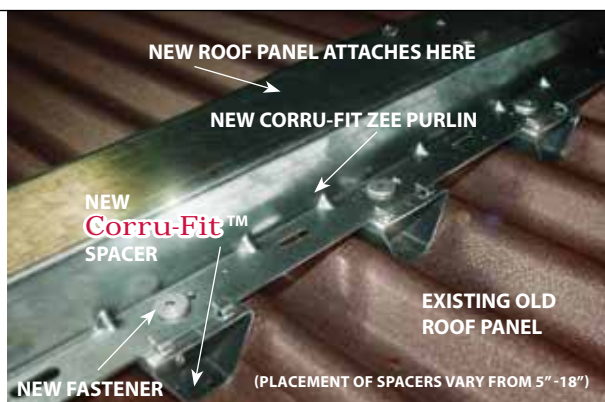
Roof Huggers are typically shipped in 10' to 12' lengths, as based on existing panel rib spacing.

Typically, the HUGGERS are overcut 3/4" - 1" wider and about 3/8" - 1" taller than the existing ribs to allow for some "run-out" of the existing panel. Many panels however may have less clearance. ROOF HUGGER recommends that you measure the existing panels over a 10' to 20' distance to confirm the actual "In-Place" module of the existing roof panel ribs to insure an accurate part fit.

Roof Hugger solves the correct structural connection and panel modularity problems of corrugated roofs with CORRU-FIT!



CORRU-FIT™
Huggers PATENT PENDING
By ROOF HUGGER



We never had a roof we couldn't fit!

The CORRU-FIT Spacer is placed into the lowest part of a corrugated panel with spacing as per design specifications. A single fastener is installed through the new Roof Hugger slotted Zee Purlin, through the pre-punched CORRU-FIT Spacer, through the existing panel and into the existing purlin.

After the CORRU-FIT System has been installed, a new roof panel is attached to the new ZEE purlin. This CORRU-FIT System eliminates all of the problems inherent with installing retro-fit roofs on old corrugated panels.

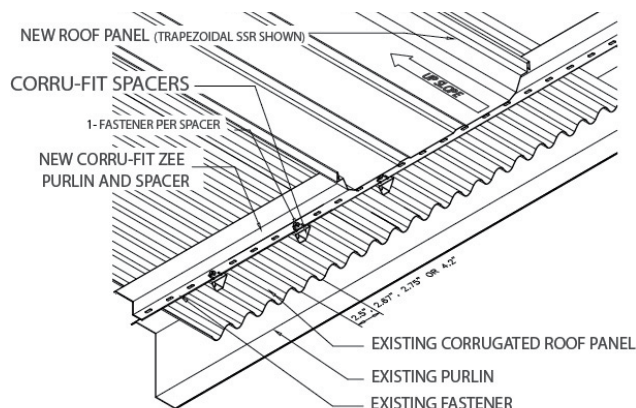
There are countless old roofs out there with 2.5", 2.67", 2.75", 4.25" and other rib spacing. We know this because Roof Hugger has been manufacturing factory-notched sub-purlins for these problematic roofs for decades.

The problem with these old roofs is that they are notorious for inconsistent corrugated rib spacing, making it very difficult to install a structurally sound sub-purlin system that should only attach in the low corrugation, directly into existing roof purlins.

Roof Hugger's newest product, Corru-Fit™ Huggers, are especially suited for existing corrugated roofs. It is the ONLY factory manufactured system available in the market today having ASTM E-1592 wind uplift testing.

Features

- Specifically designed to accommodate that notorious corrugated roofing's inconsistent rib spacing
- Factory templates for confirmation of rib spacing
- Corru-Fit's zee-shaped purlin is factory slotted for easy corrugation alignment and fastening
- Designed to fit all corrugations up to 1.25" depth
- Corner and edge reinforcement available
- Suitable for new screw-down or standing seam
- Saves removal and disposal of old roofing
- Maintains building diaphragm for easy upgrade to standing seam roofing
- Special self-drilling fasteners included with all Corru-Fit™ orders



Corru-Fit Hugger for Existing Corrugated Ribs up to 1.25" tall. System typically 2.75" tall total.

ROOF HUGGER now has a special patented system to retrofit high-clip standing seam roofs.

These uniquely designed Roof Huggers represent the first and only re-roof sub-framing system specifically engineered to retrofit standing seam roofs originally installed with stand-off attachment clips.

The Huggers employ unique fasteners that hold the part firmly on the pan of the existing panel but above the purlin while providing the needed structural attachment. The special patented "Anti-Rotational Arm" prevents the Huggers from pivoting on these fasteners and rolling up or down slope. The perfect solution to a difficult re-roofing project.

This system can also be useful in high snow load areas to help control drag loads on the panels.

High-Clip & Thermal Blocking



Typical high-clip assembly for trapezoidal standing seam panel.

Roof Hugger's Patented Special Anti-Rotational Sub-Framing System



Anti-Rotational Arms

Removing Lean-To Steps Made Easy

You can use TWO DIFFERENT SIZE Roof Huggers to remove troublesome roof steps created when a "lean-to" was added to an existing building. No more awkward flashings and closures. No more leaks and a beautiful roof, ALL ON ONE PLANE!!



Using 2 different heights of ROOF HUGGERS to remove a roof "step".

Existing Fasteners

Typically the existing fasteners can remain. Most "R" panel roofs are installed with the fastener near the high rib of the panel. Even though the Roof Hugger may rest upon this fastener it will bend the base flange but not create a problem. Larger headed fasteners located in the center of the existing sheet pan can cause the Huggers' to roll or porpoise and those fasteners would need to be removed.



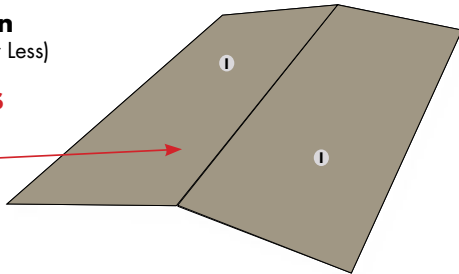
Existing fasteners usually do not have to be removed.

Ever wonder why it is necessary to add framing in the corners and the edges of an older metal buildings when reroofing?

It is because of the differences in the Pre-2002 building code and the new building code. Old code buildings have roofs designed with a uniform loads unlike today's buildings.

Roof Zone Plan
(1½:12 Roof Pitch or Less)
UNDER OLDER BUILDING CODES

UNIFORM LOADING OVER THE WHOLE ROOF

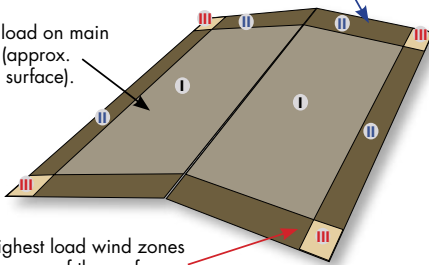


The new building code divides the roof into zones and each zone will have its' own design pressure.

Roof Zone Plan
(1½:12 Roof Pitch or Less)
CURRENT BUILDING CODES

Zone II - Medium load wind zones around perimeter - (approx. 15% of total roof surface).

Zone I - Lowest load on main field of the roof - (approx. 80% of total roof surface).



Zone III - Highest load wind zones here at each corner of the roof - (Approx. 5% of total roof surface).

The Corners (III) will have the highest pressures, the Edges (II) the next highest and the Field (I) the lowest pressures. This is a much more realistic look at how the wind affects a roof.

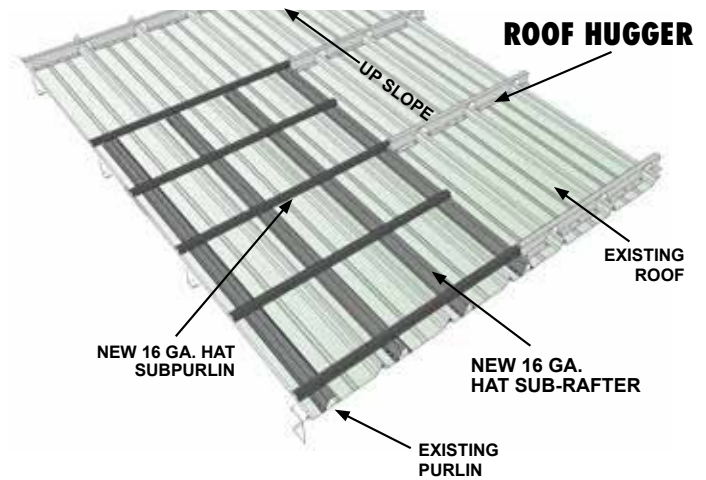


The shape and pitch of the roof and any steps in the roof will affect how snow accumulates on the building and the loads on the roof panels.

The new building code also looks at snow loads recognizing that snow can create an unbalanced load on the roof when it drifts.

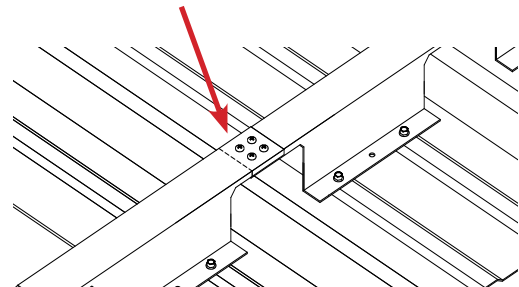
Roof Hugger has designed corner and edge framing on top of the existing roof panels to reduce the purlin spacing and correctly support the new panels to meet the higher design loads.

By using a combination of structural members running upslope (Sub-Rafters) and parallel to the existing purlins (Sub-Purlins) spaced to provide proper panel support, the proper loading is achieved. Once out of the high load zone we transition back to the easy to install Roof Hugger Sub-Purlins. In many cases where we have tested assemblies, the Sub-Rafters can be made to fit inside the Roof Hugger cutouts lowering the overall framing height and project cost.



Roof Hugger sub-purlins also add strength to the existing purlins. This is important because most retrofit systems just add weight.

This drawing shows how the Roof Hugger assembly is secured with our unique fastener system which strengthens the existing purlins.



Roof Huggers strengthen the purlins allowing them to easily handle the additional retrofit weight.

Testing – Testing – And More Testing!



E-1592 Testing of Standing Seam Panels Over Roof Huggers

Other Roof Hugger Testing Includes:

- Screw down over screw down panel systems
- Standing seam over standing seam systems
- Standing seam over screw down systems
- Reinforced gusseted systems
- Drag load testing
- Roll over testing
- 9 Florida Product Approved Assemblies
- 1 Factory Mutual Tested Assembly

Roof Hugger is Specified and Used By:

- United States Air Force, Army, Coast Guard, Corps of Engineers, Marine Corps, Navy and NASA with over 3-Million Square Feet of Facility Roofs
- State and Local Governments
- Port Authorities and Warehousing
- National Airlines and Local Aircraft Hangar Facilities
- Mini-Storage Complexes
- Churches and Education Facilities
- Utility Companies
- Retail Sales and Auto Dealerships

ROOF HUGGER Sub-purlins are Proudly Made 100% in the USA.

Adding Insulation

When you install **ROOF HUGGERS**, the air space between the existing old roof and the bottom side of the new roof is well suited to install insulation for increasing the building's thermal resistance. This is a very effective and inexpensive measure to save those energy dollars. **Case studies have shown between 21% to 25% reduction in heating and cooling cost per year.** (Each case is different and depends on the building's occupancy, inhabitants and locale.)

Typically, fiberglass blanket insulation of varying thicknesses is installed but many building owners and design professionals will opt for rigid insulation. Both examples shown (right).

How Do Above Sheathing Ventilation (ASV) System Dynamics Work?

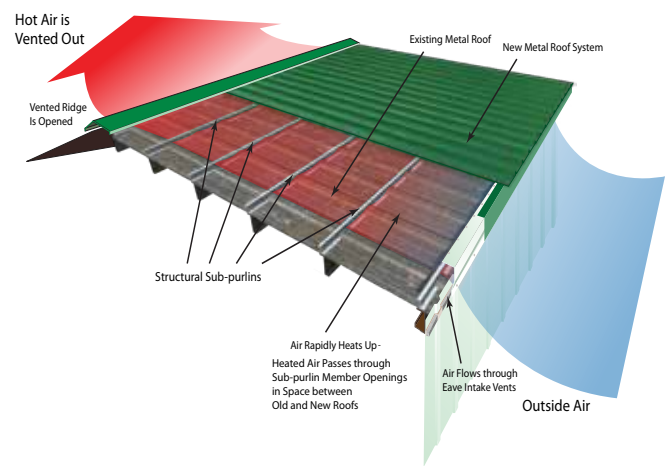
Fresh air is introduced to the cavity between the old and new roofs through ventilation at the low-eave of the building. When the sun heats the new metal roof, the cavity air becomes less dense. Because of this, the air becomes more buoyant and therefore begins to move upslope at the immediate underside of the new metal roof. The air is then exhausted at the high point of the roof (ridge, etc.) through convection. The end result is the system creates an insulating barrier of air between the two roofs. Many ventilation products are available that accommodate these applications and the system has the natural ability to dissipate any moisture caused by condensation as well as aiding in the elimination of mold growth.

Energy Efficient Retrofit Assemblies

Retrofitting a roof with Roof Hugger creates any number of possibilities for improving the energy efficiency of an existing building.

The height of the Roof Huggers can be specified to accommodate any thickness of fiberglass or rigid insulation. Above sheathing ventilation can be incorporated, glycol tube heat recovery coils can be added, high efficiency tall clip standing seam panels can be used and bracket or laminate photovoltaic panels can easily be added on the new panels without panel penetrations.

If photovoltaic systems are to be added, typical 40-50 year life metal roofing is the only roof system that will outlast the useful life of the photovoltaic panels. This eliminates the huge cost of photovoltaic removal, re-roofing and reinstallation of the photovoltaic system typically required at the 15-20 year mark for conventional roofing materials.



This illustration represents a re-roofing assembly that employs both new insulation, radiant barrier and ASV dynamic ventilation for High-R systems with thermal resistance as much as R-50.



Actual photo and mock-up of a High R-Value, Dept. of Defense project: Good Fellow AFB, Texas.

Expert Metal-over-Metal Re-roofing Information is at your Fingertips.



Download these to Help You with your Project...

- Design and Installation Manuals
- Over 65 AutoCAD Construction Details
- Design Performance Specifications
- Videos and Past Project Photos
- Energy Efficient Retrofit Roofing
- Free AIA Accredited Webinars
- Free Sales & Installation Webinars
- Online Quote Requests
- Request a Budget Estimate
- Retrofit Do's & Don'ts
- Published News Articles

Request a Component or Preliminary Design Quotation at www.roofhugger.com

What Our Customers are saying about Roof Hugger Solutions...



"The simple and non-invasive Roof Hugger System enables us to offer an excellent, cost effective roofing solution in our difficult weather environment"

Ron Haffner, Vice-President
Design North, Inc.
Juneau, Alaska

"We have used Roof Hugger for many years and rely on their expertise for providing solutions when re-roofing over existing metal roofing"

Bill Chandler, Executive Vice-President
Drexel Metals/Met-Fab
Elkridge, Maryland



ROOF HUGGER has been in the Metal-over Metal Retro-fit Business Since 1991 - Put our Vast Experience to Work for You – Call 800-771-1711



Proudly Made
in the U.S.A. 

The Leader in Retrofit Re-roofing Solutions

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Odessa, FL 33556

Phone: 800-771-1711

Fax: 877-202-2254

HEADQUARTERS:

142 Whitaker Rd., B

Lutz, FL 33549

MANUFACTURING PLANTS:

■ Tampa, Florida

■ Longview, Texas

■ Spokane, Washington

■ Logansport, Indiana

MEMBERS OF:



Benefits of Using Roof Hugger

- Safe, Fast and Easy to Install
- No disruption to building operations
- Fits nearly all existing metal roofs
- Fully-engineered systems to meet new code
- Can strengthen existing purlins
- Allows for upgrade to Standing Seam Roofing
- Decreases energy costs
- Online ACad details & Specs – LEED point Qualified
- Free Design load and budget estimates



800-771-1711

www.roofhugger.com

