

# S-5!<sup>®</sup>

## The Right Way!

ColorGard<sup>®</sup> is the only snow retention system to be warranted for the life of the roof! It's unsurpassed holding strength and perfect color-match are guaranteed!



### ColorGard<sup>®</sup>

When snow accumulations begin to melt, the result can be catastrophic as the blanket of snow avalanches off the roof, dumping tons of snow onto anything in its path, damaging landscape, gutters, adjacent roofs, and vehicles, and causing injury or death to passers-by. ColorGard<sup>®</sup> dramatically reduces the risks associated with rooftop avalanches and maintains the clean colorful appearance of the roof with perfect color and finish matching, which lasts as long as the roof itself! ColorGard is the only snow retention system designed and

engineered on a site-specific basis; guaranteed to perform, to not damage the roof or finish, and to exactly match the roof color—for the entire life of the roof\*.

Today's premium Kynar 500<sup>®</sup> and Hylar 5000<sup>®</sup> (PVDF) paint systems used on metal panels are "coil-coated" and oven-cured. This is the only finish application method that can be warranted against color fade for 30 years or longer. Nothing can equal it! So, why settle for less in a snow guard system? While some dyes, powder-coats and air-dried color application methods may initially simulate a perfect match, the color soon begins to fade and becomes increasingly mismatched with a few years of age. By utilizing a strip of the actual roof material, ColorGard perfectly matches the roof—forever!

ColorGard is mechanically attached with patented S-5!<sup>®</sup> clamps. S-5! is the trusted name in metal rooftop attachment technology worldwide. S-5! patented, round-point setscrews grip the seam securely without penetration and without damage to the panel's protective finishes. The clamps are precision-machined from aircraft quality, high tensile aluminum—not cast or plastic. All related hardware is non-ferrous stainless steel for lasting performance.

\*See Optional Limited Lifetime Warranty information at the S-5! website ([www.S-5.com](http://www.S-5.com)).

The right way to attach almost anything to metal roofs!

ColorGard<sup>®</sup>

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# S-5!<sup>®</sup>

The Right Way!

ColorGard<sup>®</sup> dramatically reduces the risks associated with rooftop avalanches and maintains the clean colorful appearance of the roof with perfect color and finish matching, which lasts as long as the roof itself! ColorGard is the only snow retention system designed and engineered on a site-specific basis.

## Can ColorGard<sup>®</sup> be Retrofitted to an Existing Roof?



Yes, **ColorGard<sup>®</sup>** can be easily retrofitted to existing roofs, or incorporated into new construction design. Using S-5!<sup>®</sup> CorruBrackets<sup>™</sup> or VersaBrackets<sup>™</sup>, ColorGard installs perfectly on corrugated and exposed-fastened roofs. ColorGard can be installed any time of year.

## Is Design Assistance Available For ColorGard<sup>®</sup>?

Yes! It is critical to design a solution that takes into account the effects of gravity on a snow-covered roof. The tested holding strength of ColorGard must be checked and proven against the actual “in-service” gravity loads of the roof. This important step in application engineering should not be omitted for any snow retention product.



Consult with your distributor or use our online calculator at [www.S-5.com](http://www.S-5.com) to help quickly and easily design each job. The calculator will help you to “tailor” the ColorGard system on a project-specific basis, allowing for all the variables involved—and even provide a printout of the calculations and a material requirement list.

S-5! also offers its Certified Calculation Program. To receive the engineer stamp of approval, simply submit your project calculations to our registered engineer for a professional review. Learn more at [www.S-5.com/Calculator](http://www.S-5.com/Calculator).

## How Easy is it to Install?

Once designed, ColorGard is easy to install, requiring tools that are common to the trade. Because S-5! ColorGard uses mechanical attachment rather than adhesives, installation can be done any time of year, with no cleaning, no priming, no cure times, and no callbacks!

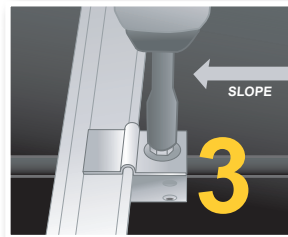
## What About Cost?

ColorGard is the best buy on the market! This is the best news of all! ColorGard has greater holding strength, better aesthetics, longer service life, and lower installed cost than any other engineered system on the market. Pound-for-pound of holding strength, ColorGard is a better buy than individual cleats or glued units.

## Why is S-5!<sup>®</sup> the Best Choice?

The premium finishes used on today’s metal roof products are fluorocarbons—paint resins that are similar in chemical composition to “Teflon,” the popular non-stick coating. The benefits of this type of paint are related to its nonstick characteristics. Chemical bonds like tapes, glues and adhesives, therefore, provide only temporary and unreliable solutions. Other mechanical alternatives that involve penetrating the roof or galling the surface result in leakage, corrosion, and voided warranties. Thanks to our patented round-tip setscrews, S-5! clamps do not pierce metal paneling, thereby protecting roof coatings and weather-tightness warranties.

Check out our ColorGard<sup>®</sup> Mobile Calculator



### S-5!<sup>®</sup> Warning! Please use this product responsibly!

Products are protected by multiple U.S. and foreign patents. Visit the website at [www.S-5.com](http://www.S-5.com) for complete information on patents and trademarks. For maximum holding strength, setscrews should be tensioned and re-tensioned as the seam material compresses. Clamp setscrew tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel, and between 130 and 150 inch pounds for all other metals and thinner gauges of steel. Consult the S-5! website at [www.S-5.com](http://www.S-5.com) for published data regarding holding strength.

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# S-5!<sup>®</sup>

## The Right Way!

Tests have proven the X-Gard™ to be the strongest pipe snow retention system available on the market.

### X-Gard™

When snow accumulations begin to melt, the result can be catastrophic as the blanket of snow avalanches off the roof, dumping tons of snow onto anything in its path, damaging landscape, gutters, adjacent roofs, vehicles, and causing injury or even death to passers-by.

X-Gard™ is the newest snow retention solution from S-5!® and can be designed as a one- or two-pipe system spanning up to 46". Tests have proven the X-Gard to be the strongest pipe snow retention system available on the market.

The innovative double-clamp design allows X-Gard to provide unprecedented holding strength when attached with S-5!'s standard or even mini-sized clamps. This employment of two clamps at each point of attachment ensures that a properly installed X-Gard is your most reliable snow retention solution.

X-Gard is mechanically attached with patented round-point setscrews, gripping the seam securely without penetration and without damage to the panel's protective finishes.

This new snow retention solution can be easily retrofitted to existing roofs or incorporated into new construction design. It can be installed any time during the year on almost any metal roof profile, including corrugated and trapezoidal.

The right way to attach almost anything to metal roofs!



S-5!<sup>®</sup> X-Gard™

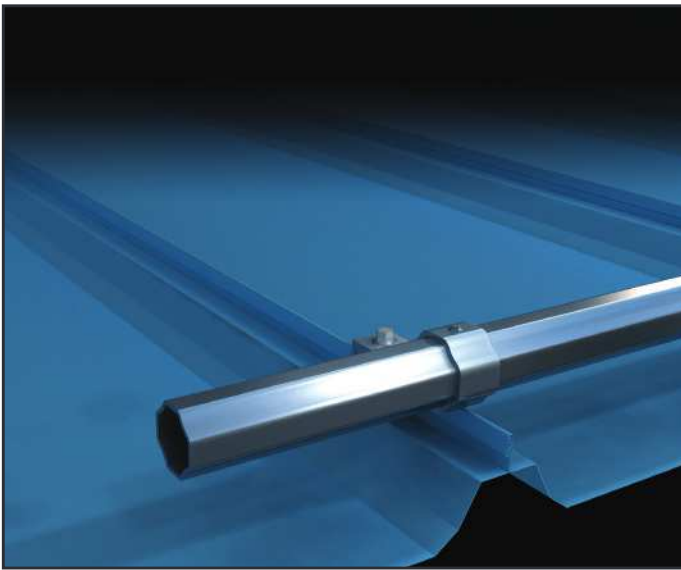
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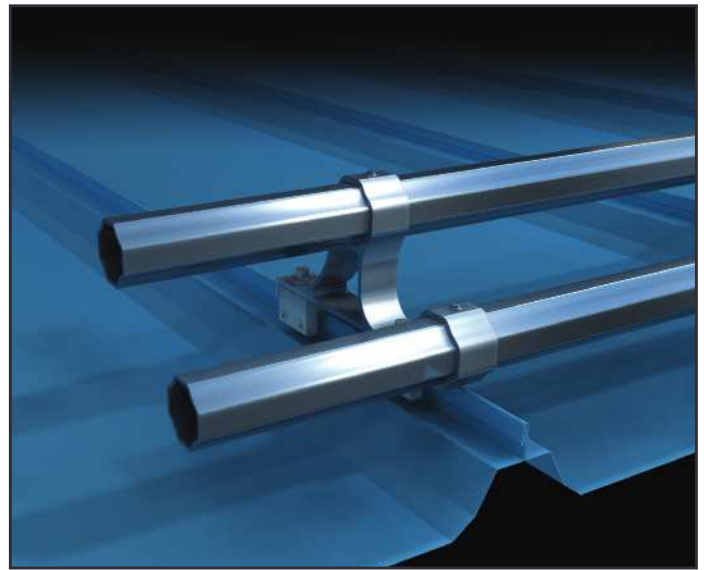
## X-Gard™ Offers Versatility In Snow Retention

X-Gard™ can be purchased as a one- or two-pipe system, using mini or standard S-5! clamps, depending on project specifics including pitch and snow load.

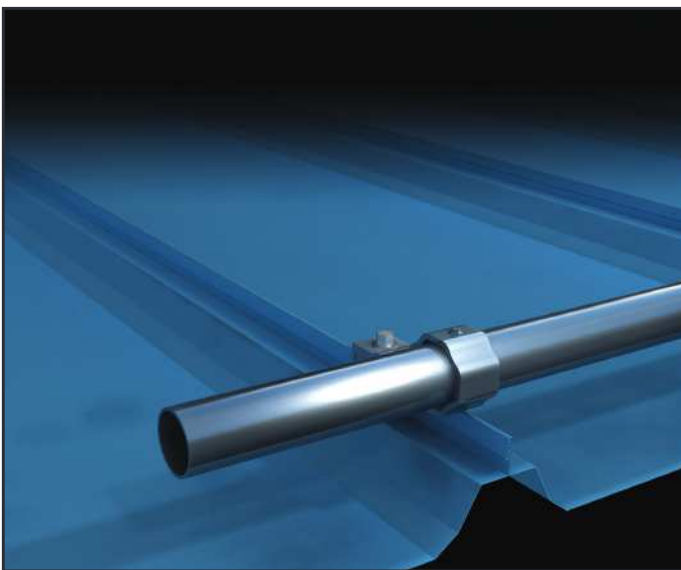
The single- and double-pipe options can also be paired with a locally-purchased round pipe, or, for superior holding strength, X-Gard can be paired with the patented NeX-Pipe™.



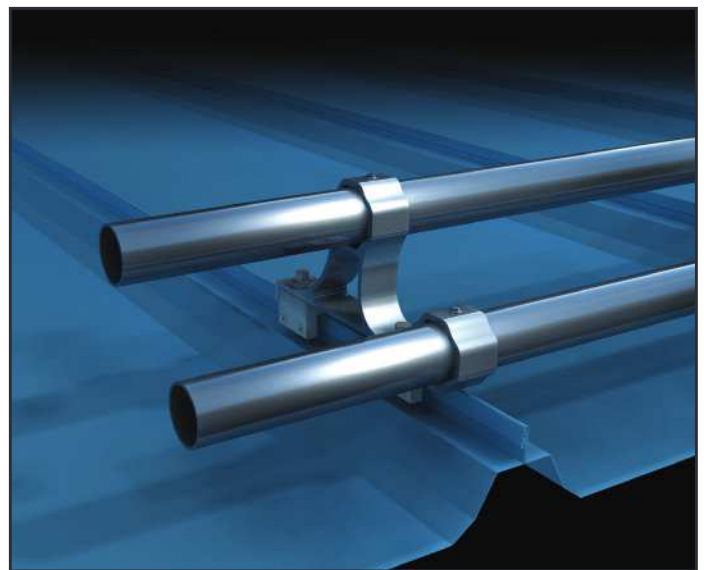
**X-Gard 1.0**  
1-Pipe System Using NeX-Pipe



**X-Gard 2.0**  
2-Pipe System Using NeX-Pipe



**X-Gard 1.0**  
1-Pipe System Using 1.9" Round Pipe



**X-Gard 2.0**  
2-Pipe System Using 1.9" Round Pipe



## Lasting Quality

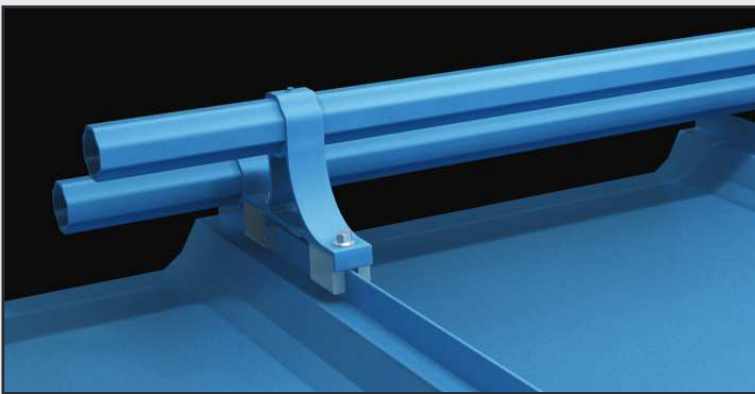
The X-Gard™ brackets, as well as the attachment clamps, are precision-machined, high tensile, aircraft quality aluminum, not cast or plastic. All related hardware is non-ferrous stainless steel for lasting performance.

X-Gard has greater holding strength, better aesthetics, and longer service life than any other engineered pipe system on the market. Pound-for-pound, X-Gard provides better holding strength than individual cleats.

X-Gard is compatible with most common metal roofing materials. Please visit [www.S-5.com](http://www.S-5.com) for more information including CAD details, metallurgical compatibilities and specifications.

X-Gard has been tested for load-to-failure results on most major metal roof brands and profiles. The independent lab test data found at [www.S-5.com](http://www.S-5.com) can be used for load-critical designs and applications.

## X-Gard™ Finish Options



X-Gard snow retention system is designed to preserve the coveted aesthetics of the metal roof. Based upon project needs, X-Gard can be painted, powder coated, or anodized as chosen by the customer.

**Coming  
Soon!**

## The X-Gard™ Calculator!

**Project design assistance is available for the X-Gard snow retention systems.**

It is critical to design a solution that takes into account the effects of gravity on a snow-covered roof. The tested holding strength of X-Gard must be checked and proven against the actual “in-service” gravity loads of the roof. This important step in application engineering should not be omitted for any snow retention product.

Consult with your distributor or use our online calculator at [www.S-5.com](http://www.S-5.com) to help quickly and easily design each job. The calculator will help you “tailor” the X-Gard system on a project-specific basis, allowing for all the variables involved—and even provide a printout of the calculations and a material requirement list.

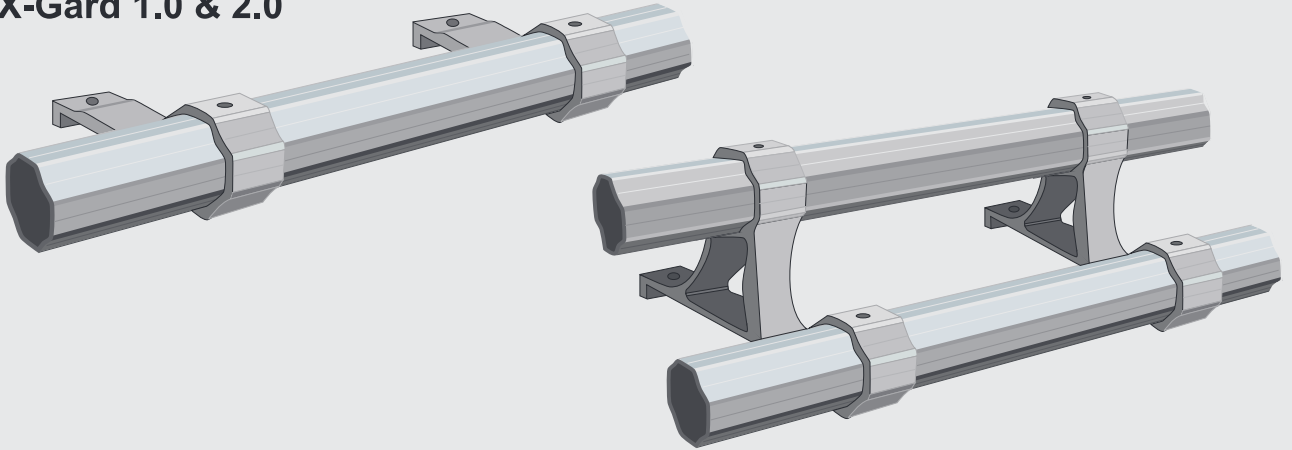
The X-Gard Calculator was developed using groundbreaking technology and is the first in the world of its kind. Just provide the calculator with project-specific information, and it will immediately produce:

1. Printable/downloadable project specs
2. System configuration options
3. Cost estimates for select configurations

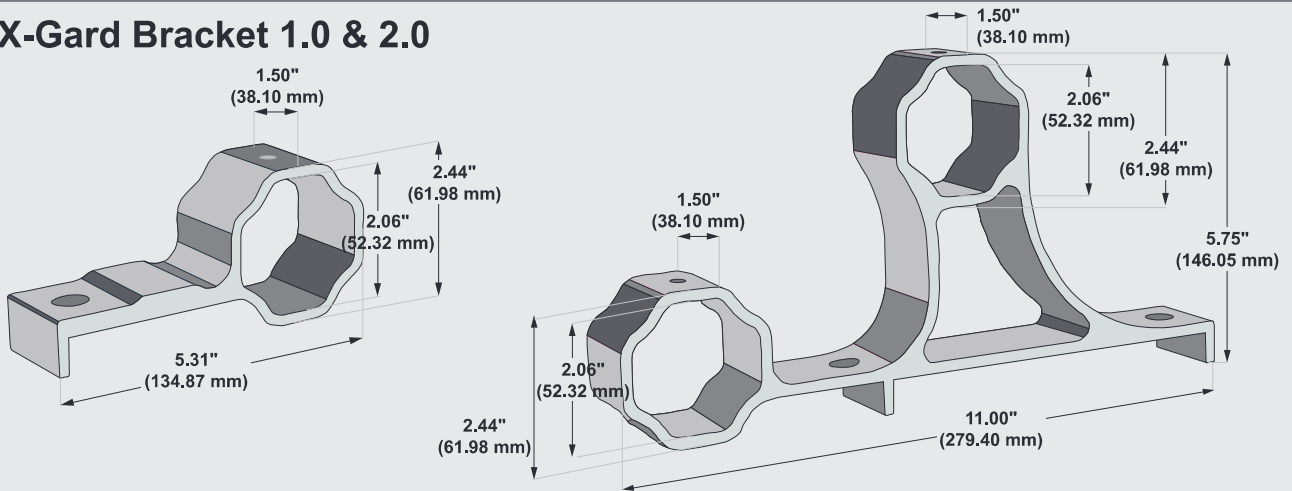
Once designed, X-Gard is easy to install, requiring tools that are common to the trade. Because S-5!® X-Gard uses mechanical attachment rather than adhesives, installation can be done any time of year, with no cleaning, no priming, no cure times, and no callbacks!

# X-Gard™ Components

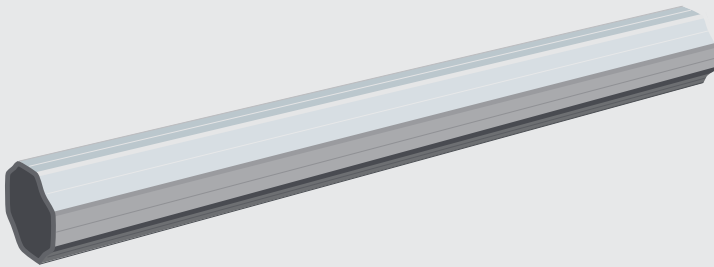
## X-Gard 1.0 & 2.0



## X-Gard Bracket 1.0 & 2.0

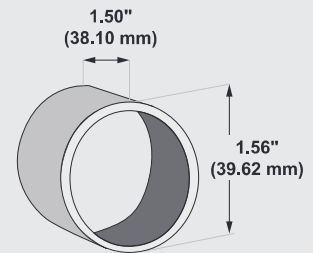


## NeX-Pipe



2.00" NeX-Pipe (wall 0.75")  
8, 16, 20' long pipe options

## NeX-Pipe Splice



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# S-5!<sup>®</sup>

## The Right Way!

DualGard™  
two-pipe system:  
Versatility, reliability  
and strength in  
one system.

DualGard™ is a complete, 2-pipe snow retention system created for those who prefer a pipe-style snow retention system with the strength, testing, quality and time-proven integrity you expect from S-5!. DualGard can also be color-finished to match the roof. The system utilizes two anchor points per bracket, and can be engineered for structural adequacy online with our new DualGard Calculator and backed by independent lab testing. DualGard is the most versatile and reliable pipe system on the market. And in the S-5! tradition—also the lowest cost.

The right way to attach almost anything to metal roofs!

DualGard — a complete system including:

- DualPipe™ (1" diameter)
- DualBracket™
- DualClip II™
- DualClip III™
- DualGard Splice
- DualGard Endcaps
- DualCollar™

S-5!<sup>®</sup> DualGard

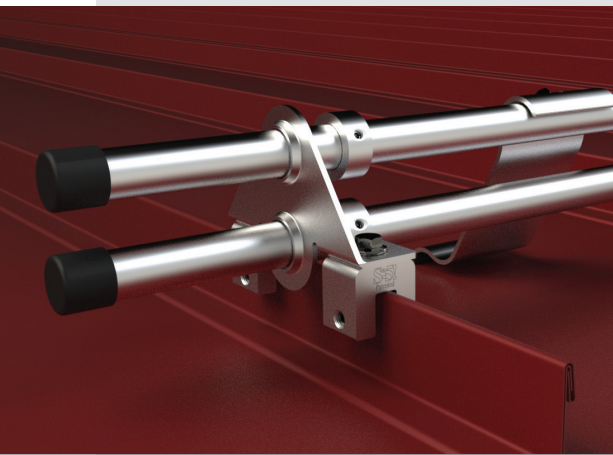


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## DualGard™: Effective Snow Retention

When snow accumulations begin to melt, the result can be catastrophic as a heavy blanket of snow avalanches from the roof. DualGard gives you a reliable solution. Incorporating independently A2LA-certified laboratory-tested S-5! Mini clamps and the online calculator, you can be assured that DualGard will hold up to the challenge.



As with S-5! ColorGard®, SnoRail™/SnoFence™ and X-Gard™, the DualGard snow retention system provides superior, documented holding strength when compared to individual cleats, adhered plastic parts and other snow retention systems.

### Snow retention systems are VITAL SAFETY EQUIPMENT.

When designed and installed correctly, they are used to protect property and individuals. That's why all S-5! clamps and snow retention systems are thoroughly tested and certified by an independent third party lab.

**When other brands claim to be "just as good as S-5!", tell them to PROVE IT.**

A2LA Cert No. 0018.04

### S-5!® Warning! Please use this product responsibly!

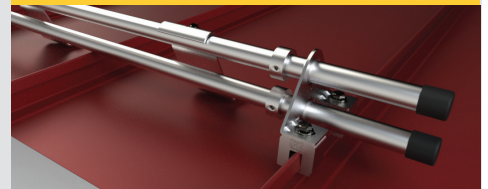
S-5! products are protected by multiple U.S. and foreign patents. Visit [www.S-5.com](http://www.S-5.com) for complete information. DualGard assemblies should not exceed 100' in length. When a longer run is necessary, divide into multiple assemblies to avoid accumulated thermal expansion. For maximum holding strength, setscrews should be tensioned as the seam material compresses. Clamp setscrew tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel, and between 130 and 150 inch pounds for all other metals and thinner gauges of steel.

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The independent lab test data found at [www.S-5.com](http://www.S-5.com) can be used for load-critical designs and applications.

### DualGard Advantages:

- DualGard Brackets work with a range of clamps and offer lateral system stability.
- DualClip easily mounts to the pipes for increased snow and ice retention.
- DualGard is compatible in metallurgy with all common metal roofing (except copper).
- DualGard can be installed any time of the year.



### TAILOR EACH PROJECT WITH EASE

The DualGard Calculator not only ensures structural adequacy, but generates a materials list, too.

**DualGard Calculator  
available now at [www.S-5.com](http://www.S-5.com)**

### Distributed by:



# S-5!<sup>®</sup>

## The Right Way!

### S-5-PV Kit and EdgeGrab<sup>™</sup>



The concept of combining photovoltaic arrays with standing seam metal roofing is growing—and for good reasons. A standing seam metal roof has a life expectancy consistent with that of framed PV modules. A 30-year power source on a 40-year roof, along with zero-penetration technology, creates the most sustainable roof system available with alternative power generation, all without compromising the roof manufacturer's warranty!

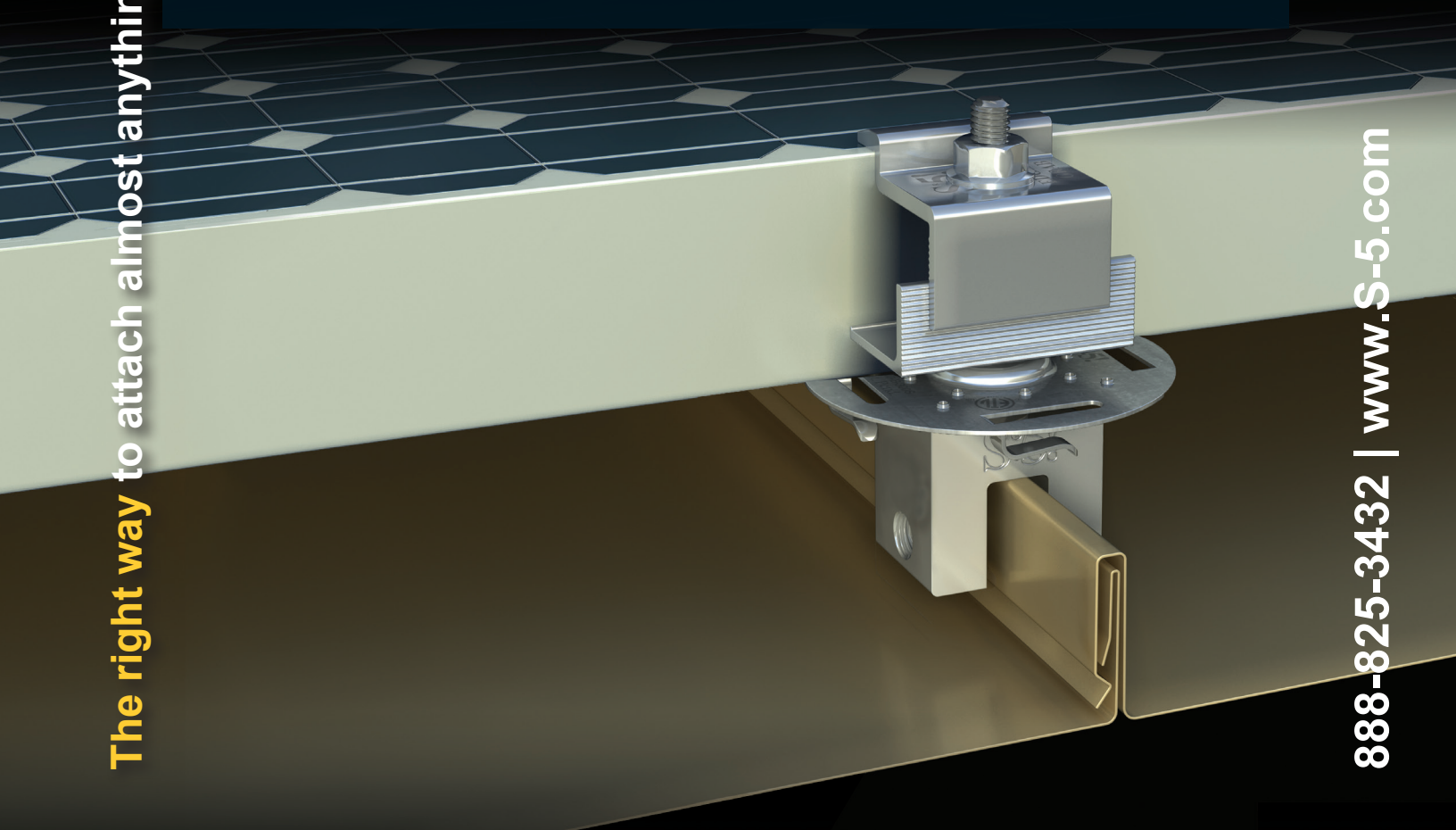
The new S-5-PV Kit boasts an important breakthrough in PV mounting technology. It is one of the first solar module mounting solutions in the industry to be listed to the new UL subject 2703, a standard that covers both bonding and mounting. Furthermore, the S-5!<sup>®</sup> Mounting Disk has gained an ETL Listing to UL 1703.\*

The S-5-PV Kit features a groundbreaking new stainless steel mounting disk with twelve nodes designed to ensure the module-to-module conductivity of anodized aluminum module frames. This means it automatically provides a ground path in the module frame. No lugs or wire required except to connect one string of modules to another and to ground the system. This connection detail represents installed electrical cost savings of \$6-\$12 per unit. In most cases, the savings in time and materials is sufficient to pay for the entire S-5-PV Kit and clamp setup.

The right way to attach almost anything to metal roofs!

S-5-PV Kit and EdgeGrab<sup>™</sup>

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# S-5!<sup>®</sup>

## The Right Way!

The S-5-PV Kit is a revolutionary new solution to attach solar PV panels to standing seam metal roofs!

The **S-5-PV Kit** is furnished with the hardware shown at right, excluding the attachment clamp, which is supplied separately. (When ProteaBracket™ is used in conjunction with the S-5-PV Kit, an additional nut is required during installation to secure the universal PV stud and mounting disk to ProteaBracket's slotted L-flange.) The S-5-PV Kit is compatible with most common metal roofing materials, including brass. The S-5!<sup>®</sup> **EdgeGrab™** and S-5-PV Kit together accommodate PV frame thicknesses 30–48 mm (if EdgeGrab's serrated L-flange is positioned below the stud's hex nut) and 34–51 mm (if EdgeGrab's serrated L-flange is positioned above the stud's hex nut).†

The embossed panel guide makes the module placement easier. The mounting disk is multi-directional and rails are not required.

Four strategically placed under-disk hooks assist in wire management. The PV grab ears that hold the solar panel in place are broader to allow for ease of installation and precise module engagement.

Accommodating module thicknesses between 30 and 51 mm, the S-5-PV Kit fits the majority of solar panels on the market. Using the S-5! mini clamps, it fits most standing seam metal roofs. When paired with other S-5! products, the S-5-PV Kit and EdgeGrab will work on most exposed-fastened and corrugated metal roofs. The standard grab is designed to fit field conditions (two adjacent panels), while the new EdgeGrab is designed specifically for end conditions.

Wind dynamics are complex; thus, each system should be reviewed by a qualified licensed professional who understands wind effects on metal roof design and construction prior to purchase and installation. For more detailed information including specifications, installation instructions, and CAD drawings, visit [www.S-5.com](http://www.S-5.com) or your S-5-PV Kit distributor.

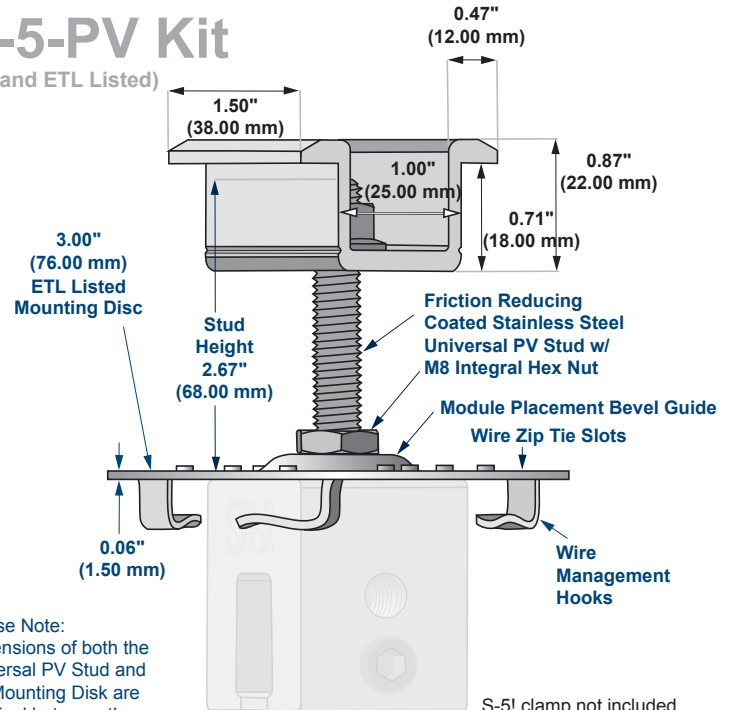
The S-5-PV Kit continues to be the easiest, most cost-effective way to install solar panels directly to standing seam metal roofs, remaining the most popular choice worldwide.



Listed to UL subject 2703.  
ETL Listed to UL 1703.\*

## S-5-PV Kit

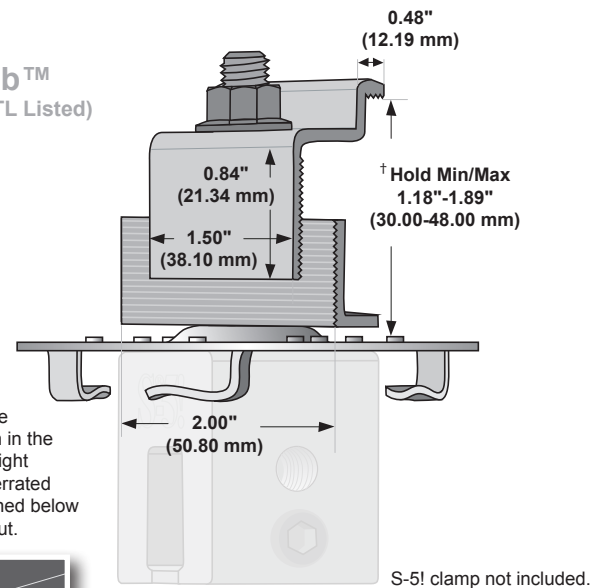
(UL and ETL Listed)



S-5! clamp not included.

## EdgeGrab™

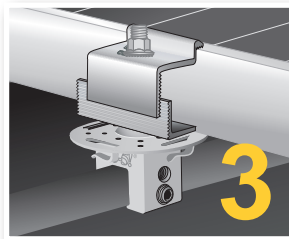
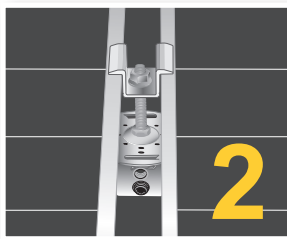
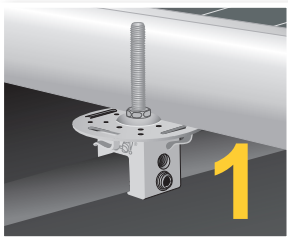
(Not UL or ETL Listed)



S-5! clamp not included.

Please note: All measurements are rounded to the second decimal place.

\* Patents pending. Certain components featured in illustration may not be UL listed. Due to the variety of attachment needs, S-5-PV Kits are sold separately from S-5! mini clamps. The S-5-PV Kit fits only S-5! mini clamps, NOT standard clamps.



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