Making Solar More Affordable Through Innovation
Who am I?

- Rick Gentry
- Executive Vice President
  - Sales Consultant
  - Product Development
  - Marketing Strategies
- Experience
  - 30 years working at Quickscrews & Pioneer of QuickBOLT
  - Fastener salesman for 34 years
  - First Employee Hired by Quickscrews
Summary

• Brief History and Philosophy of SolarRoofHook
• Code Compliance and Best Practices
• Mounting Solutions for Asphalt Shingle, Tile, Stone Coated Steel, and Metal Roofs
• How SolarRoofHook’s Innovative Products Increase Your Profits
Our line of products spans five of the most popular roof types across the United States.
Who are We?

- **Quickscrews International Corp.**
  - Founded in 1987 by Greg Wiener
  - Family-owned business
  - HQ in Livermore, CA
  - Now the nation's largest supplier of Woodworking Screws

- **QuickBOLT**
  - Established in 2010
Great Recession in 2008
Less homes being sold → Less homes being built → Less screws being used
What Next?

- Housing Decreases
- Residential Solar Soars
- Solar PV Prices Drop
Why Solar?

“Driving into wood is driving into wood” ~ CEO, Greg Wiener
Education

- Product Training
  - Features and Specifications
  - Test data and Results
  - Installation Videos

- Free Resources
  - Infographics
  - Product Posters
  - YouTube Videos

- Industry Partners
  - NABCEP
  - SEIA
  - CALSEIA
Education

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https://youtu.be/tHb-u0IgCAI
Innovation

- Customer feedback
- Start with Why
Reduce Costs

1. Lower material costs
2. Less time spent on roof
3. Lower costs of doing business
Innovation Starts at the Factory
Making of a QuickBOLT

• Thicker steel provides a safer attachment
• Added flexibility to connect rails
Designed BY and FOR the Man on the Roof

• Smooth, slotted base plates
• Double sided knurls offer stronger grip

Photo Source: SolarRoofHook
Where the Magic Happens
Bending & Welding

Photo Source: SolarRoofHook
Finishing the Hook

- Hooks sandblasted for smooth surface
- Adjustability is key in the field
Catching the Problem before you’re up on the roof

- Quality Control is key to ensuring safe product
- Ready to be shipped!
Customer Service

- Custom designs in **2 weeks**
- Mass production in **60 days**
- **Free Freight** for Orders over $100 online
- Orders before 1pm **ship same day**
Solar Mounting Screws

**Fully Threaded Coarse Thread**
- Steeper thread angle
- Engages wood for greater holding power
- Drives faster

**Hex Washer Head**
- No need for separate washer
- Eliminates possibility of over driving the screw

**Type 17 Point**
- Reduces stress when driving
- 31% sharper
- Reduces splitting in wood

Photo Source: SolarRoofHook
QuickBOLT™
PAT #8448407
For Asphalt Composite Shingle Roofs

M6 Deep Socket Hex Driver

Collar compresses the washer when driving

Stainless Steel backed EPDM washer
QuickBOLT Installation
Simply drill, seal, and mount... it’s that easy!

https://www.youtube.com/watch?v=GUy1d6FbKAk
Leak-Proof seal is code-compliant

Adjustable

Asphalt Shingle

Heat Resistant up to 250° F

Photo Source: QuickBOLT
ABSOLUTELY NO LEAKAGE.

A water pressure of 30 PSI is equal to 832 inches of rain.

The HIGHEST recorded annual rainfall in the world is 467 inches.
Asphalt Shingle

Side Mount

Aluminum Flashing
15987

Flashed L-Foot

Galvanized Flashing
17713

Photo Source: QuickBOLT
Asphalt Shingle

Side Mount

Flashed U-Foot
17592

Photo Source: QuickBOLT
Expertise in Mounting

Innovative hooks designed for the most popular roofs in America, designed to reduce installation costs.

Photo Source: QuickBOLT
Flat Tile

Side & Bottom Mount

Screw Kits Available

17540

Photo Source: QuickBOLT
Flat Tile Screw Kits Available

Side & Bottom Mount

5/16” Heavy Duty

Photo Source: QuickBOLT
### FLAT TILE ROOF HOOK vs. HEAVY DUTY FLAT TILE ROOF HOOK [HD+]  

<table>
<thead>
<tr>
<th>Hook Thickness</th>
<th>Span Length</th>
<th>Average Maximum Compression Load (lbs.)</th>
<th>Average Maximum Tensile Load (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat Tile Roof Hook</td>
<td>5mm</td>
<td>4 ft.</td>
<td>141</td>
</tr>
<tr>
<td>Heavy Duty Flat Tile Roof Hook [HD+]</td>
<td>7mm</td>
<td>6 ft.</td>
<td>691</td>
</tr>
</tbody>
</table>

Complete Test Results Available Online
FLAT TILE

https://www.youtube.com/watch?v=hSW7dFLrYIs
CURVED TILE
Curved Tile

Side & Bottom Mount

Screw Kits Available

Photo Source: QuickBOLT

17508
Curved Tile

Adjustable

Side & Bottom Mount

Screw Kits Available

17520

Photo Source: QuickBOLT
Curved Tile

Adjustable

Side Mount

Screw Kits

Available

Photo Source: QuickBOLT
CURVED TILE

3. Adjust the Roof Hook

Peak

Valley
CURVED
TILE

https://www.youtube.com/watch?v=tp6a0F7gB_8
CURVED TILE
Curved & Flat Tile

ADJ
Adjustable

Side & Bottom Mount

Screw Kits Available

17585

Photo Source: QuickBOLT
ALL TILE

https://www.youtube.com/watch?v=SNWnBOiB1AM
17585
34mm - 42mm height range | 3 leverage points
Arm length 120mm
Arm height 147mm
Curved Flat Adjustable Side Mount Screw Kits Available

17578
34mm - 42mm height range | 3 leverage points
Arm length 120mm
Arm height 50mm
Curved Flat Adjustable Bottom Mount Screw Kits Available

17700
34mm - 42mm height range | 3 leverage points
Arm length 145.4mm
Arm height 127mm
Curved Flat Adjustable Side Mount Screw Kits Available

Flashing available
15893
Curved Tile

Flat Tile

Stone Coated Steel

15893 & 17582

Photo Source: QuickBOLT
Optional Paper Protection
Aluminum Flashing If Necessary

Part # 15893

Photo Source: QuickBOLT
10. Place the Tiles & Mark Them
STONE COATED STEEL

Photo Source: QuickBOLT
Screw Kits Available

Stone Coated Steel

Adjustable

Side & Bottom Mount

Photo Source: QuickBOLT

17548
Stone Coated Steel

Side & Bottom Mount

Screw Kits Available

17620

Replacement for 17532

Photo Source: QuickBOLT
Stone Coated Steel

Side Mount

Screw Kits Available

Photo Source: QuickBOLT
STONE COATED STEEL
The report evaluates the connection between various racking systems and SolarRoofHook mounting products and concludes that SolarRoofHook mounting products are compatible with notable major racking manufacturers including Snap-N-Rack, IronRidge, Unirac, and Everest. The image above is a snapshot of the report.

<table>
<thead>
<tr>
<th>Racking Manufacturer</th>
<th>Racking Model Number</th>
<th>Solar Roof Hook Product Compatibility</th>
<th>Exceptions &amp; Modifications</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snap-N-Rack</td>
<td>100</td>
<td>Compatible</td>
<td>Min 0.1” thick washer, tighten to max published torque value</td>
<td>Use the lowest value from SRH pull test data or Table 3.</td>
</tr>
<tr>
<td>IronRidge</td>
<td>X10, X100, X1000</td>
<td>Compatible</td>
<td>None</td>
<td>Use the lowest value from SRH pull test data or Table 3.</td>
</tr>
<tr>
<td>Unirac</td>
<td>SolarMount, SunFrame</td>
<td>Compatible</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Everest</td>
<td>CrossRail</td>
<td>Compatible</td>
<td>None</td>
<td>Bolt must fit in slot</td>
</tr>
</tbody>
</table>
METAL
Metal

Standing Seam Metal Roof

Rolled Seam Metal Roof

17646

17650
Metal

Corrugated Metal Roof

17648
17646
SolarGripz™ | For Rolled Seam Metal Roofs
For Bottom Mount Rails

17650
SolarGripz™ | For Standing Seam Metal Roofs
For Bottom Mount Rails

17648
For Trapezoidal Metal Roofs
For Bottom Mount Rails

ALL OTHER QUANTITIES CAN BE FOUND ON THE INDIVIDUAL PRODUCT PAGES ONLINE
ALL PRODUCTS ON THIS PAGE HAVE A 20-YEAR WARRANTY
Make solar more affordable by making installation more cost effective.

**How?**
- Education
- Innovation
- Reducing Costs
Thank You

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