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There’s More to See....

The fasteners shown are standard products. Inventory volumes vary dependent on market conditions; call for availability. Many related, non-standard items are not shown, but are available and will be priced on application. We offer a complete selection of fasteners, closures and accessories. Please contact us with specific requirements.

A Word About the Specification of Fasteners

Proper fastener selection takes into account where and how the fasteners are installed. Factors that must be considered include: materials being attached, environmental factors, installation conditions, and safety issues. Because product specifications, applications, and interpretations may differ, specifiers and purchasers must make their own product evaluation to be assured of suitability for the intended use.

Disclosure Statement

Fastener data shown herein is subject to change or correction for typographical error without notice. All test data and ultimate values shown in this catalog are the result of laboratory testing. Specific job conditions should be considered and appropriate safety factors applied when specifying fasteners. In actual applications, proper installation techniques must be used to assure adequate performance of the fastener. Assistance and recommendations are available by contacting your SFS intec, Inc. sales or customer service professional.

Final selection of fasteners or accessories for use is ultimately the decision of the purchaser. While SFS intec, Inc. may assist by providing data and information for comparison, SFS intec makes no suggestions or warranties pertaining to the suitability of its products for any particular application.

Galvalume® is a registered trademark of BIEC International, Inc.
TORX® is a registered trademark of Textron Inc.
ProfileVent® is a registered trademark of Ventco Inc.
Hannoband® is a registered trademark of Hanno Werk GmbH & Co. KG.
Fastener Design

Threaded fasteners for roofing and siding systems are available in a wide range of materials, designs, and coatings. When specifying your fastener, be sure to choose one that has a performance life equaling or exceeding the life of the proposed project.

Fastener Materials

Common fastener compositions:

- Zinc plated and paint coated carbon steel
- Alloy capped fasteners with zinc-aluminum, stainless steel, and nylon capped head designs
- Stainless Steel: 300 Series austenitic stainless steel
- Stainless Steel: 400 Series martensitic stainless steel
- Bi-metal: stainless head and threaded shank with a joint welded hardened carbon steel drill or sharp point

Coated Corrosion-Resistant Fasteners

SFS intec offers various coating systems such as electroplating, mechanical plating, and vistaCoat® Premium System. Zinc serves as a sacrificial coating to provide cutting-edge plating protection.

Metal Alloy Capped Fasteners

**ZAC® Zinc Aluminum Capped Head**

ZAC design fasteners provide the corrosion resistance of a zinc-aluminum alloy capped head on a hardened steel fastener for self-drilling or self-tapping installation. ZAC is the original capped zinc-aluminum head fastener and is used in more metal buildings than any other capped fastener.

ZAC design fasteners are available with a 5/16” and 3/8” capped hex washer head in Impax™ self-drilling fasteners, woodGrip™ sheet-to-wood fasteners and self-tapping screws.

**MAC™ 300 Series Stainless Capped Head Self-Drilling Fasteners**

MAC 300 Series Stainless capped head design combines the corrosion resistance of stainless steel and a hardened steel fastener for self-drilling installation. MAC fasteners are available with a 5/16” capped hex washer head in Impax self-drilling fasteners and with a 1/4” hex washer head in woodGrip fasteners.

**Prisma™ Nylon Head Self-Drilling and Self-Tapping Fasteners**

Prisma design fasteners combine the corrosion resistance of a nylon-molded head with a hardened steel fastener for self-drilling and self-tapping installation. The nylon head is formulated with the color built in. It naturally resists fading and will never rust like steel headed fasteners. Prisma design fasteners are available with 3/8” and 7/16” hex washer heads in self-drillers, woodGrip metal-to-wood fasteners, and self-tapping AB fasteners.
Stainless Steel Fasteners

A commonly held belief that stainless steel will not rust or corrode is not necessarily accurate. Stainless steel is a generic term covering over 200 different types of alloys that, to varying degrees, corrode less than carbon steel. It is important that a specifier be aware of the panel and project performance expectations when specifying stainless steel fasteners.

Several types of stainless steel are used for fasteners.

300 Series Stainless/Austenitic
- 18-8 stainless alloy with 18% chromium and 8% nickel
- Best known grades are 302, 304 and 316, both work hardened in the thread-rolling process to manufacture a self-tapping fastener capable of tapping threads into steel
- Can be manufactured as a self-drilling, bi-metal fastener by incorporating a heat-treated hardened carbon steel point joint welded to the austenitic stainless fastener
- Nonmagnetic in the annealed state, but can develop slight magnetic permeability as a result of the cold-forming process
- Provides excellent corrosion resistance compared to martensitic 410SS fasteners and plated steel fasteners
- Austenitic stainless steel (300 Series) is considered the only type of stainless steel for panel fasteners

410 Series Stainless/Martensitic
- Stainless alloy with 11.5% to 13.5% chromium
- Can be heat treated to provide hardness to manufacture as self-tapping or self-drilling fasteners (when hardened, the part has less corrosion resistance)
- Poor corrosion resistance compared to austenitic stainless
- Magnetic
- Plated to improve corrosion resistance (like carbon steel fasteners)
- Martensitic stainless is not considered suitable for panel fasteners
- 410 Series stainless steel is susceptible to the effect of corrosion stress cracking

Bi-Metal Fasteners

SX Fastener: Austenitic Stainless Self-Drilling Fasteners

SX design fasteners combine the corrosion resistance of an austenitic 300 series stainless head and threaded shank with a hardened carbon steel point for self-drilling installation. They are plated in order to protect the carbon steel point. These bi-metal fasteners install like carbon steel fasteners and provide the corrosion resistance of 18-8 300 series austenitic stainless.

When selecting a stainless steel fastener for any application where minimizing or virtually eliminating corrosion is the goal, a specifier should strongly consider the dramatically greater benefits of 300 series over 400 series stainless steel fasteners.

The richer chemical composition and SX welded drill point make 300 series stainless steel fasteners more costly, but the corrosion resistance benefits are far superior.

The fastener CL (max grip range) needs to be greater than your total application build up.

Correct selection of fastener is within the responsibility of the building design engineer. Ensure to meet all local codes.
Washer Styles

Washer design contributes to the weather seal of a fastener. SFS offers several washer options based upon the type of fastener and the application requirements.

bondSeal

- EPDM rubber bonded to metal
- Metal washers are available in galvanized steel, aluminum, and stainless steel
- Bonded washers offer a low-profile appearance
- Provides positive weather seal between panel and fastener head

Sealer Cupped Hex Washer Head

- EPDM rubber captured under integral cupped hex head washer
- Cupped washer head helps to prevent overdriving
- EPDM washer and cupped head offers an excellent weather seal
- EPDM is protected from UV rays by cupped washer head

controlSeal

- EPDM rubber captured under the stamped “dome”
- Available on all #9 woodGrip and #12 woodGrip XG screws
- Reinforced domed shoulder distributes clamp load
- EPDM washer compressed in three key areas: against the panel, metal washer surface and threads.
- Weather tight seal even if fastener is driven in on an angle*

Fastener Head Styles

SFS offers a wide variety of fastener head styles designed to meet your project and fastener requirements. Each head style will provide proper panel attachment and desired finish appearance.

Available fastener head styles are:

- *irius® drive, low profile
- HWH (hex washer head)
- Sealer cupped hex washer head
- Metal-alloy capped cupped: HWH ZAC or HWH MAC
- Pancake head
- Low Profile TORX®
- Low Profile Wafer Head

Internal Drive Types

- Phillips
- Phillips Square 2/2
- TORX®

*Proper installation techniques should always be employed.
Fastener and steel gauge sizes used throughout this Roofing and Cladding section are nominal.

**Fastener Sizes**

<table>
<thead>
<tr>
<th>Fastener Size</th>
<th>#8</th>
<th>#9</th>
<th>#10</th>
<th>#12</th>
<th>1/4</th>
<th>#14</th>
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<tr>
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<td>.181</td>
<td>.190</td>
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<td>.291</td>
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**Steel Gauge Sizes**

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<th>18</th>
<th>16</th>
<th>14</th>
<th>12</th>
<th>1/8</th>
<th>10</th>
<th>3/16</th>
<th>1/4</th>
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<tbody>
<tr>
<td>Decimal Equivalent (in.)</td>
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<td>.014</td>
<td>.015</td>
<td>.018</td>
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<td>.030</td>
<td>.036</td>
<td>.048</td>
<td>.060</td>
<td>.075</td>
<td>.105</td>
<td>.125</td>
<td>.134</td>
<td>.187</td>
<td>.250</td>
<td>.500</td>
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<tr>
<td>Decimal Equivalent (mm)</td>
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<td>.61</td>
<td>.76</td>
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<td>1.91</td>
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<td>3.40</td>
<td>4.75</td>
<td>6.35</td>
<td>12.70</td>
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</table>

*Standard steel thickness used for panels, purlins and girts.

Fasteners are designed to withstand a varied range of types of loading. Each panel or structural system has its own specific fastener loading requirements. Care must be taken to ensure that the appropriate loading requirements for each application are considered.

Typical structural performance criteria that influence fastener design include:

**Ultimate* Tension Strength**

The point at which a fastener fails under a load exerted in two direct opposite directions.

Typical ultimate tension strengths of each fastener type are provided on the fastener information pages.

**Ultimate* Torsion Strength**

The point at which a fastener fails under a twisting load exerted on the head during installation in a torsional direction.

Typical ultimate torsion strengths of each fastener type are provided on the fastener information pages.

**Ultimate* Shear Strength**

The point at which a fastener fails under a load exerted in offset opposing directions, usually upon the shank of the fastener.

Typical ultimate shear strengths of each fastener type are provided on the fastener information pages.

**Ultimate* Pull-out Performance**

The ability of a fastener’s threaded connection to remain intact and resist tensile loads.

Self-tapping fasteners require that a pilot hole be drilled prior to installation. The pullout resistance will be directly related to the pilot hole diameter.

Self-drilling fasteners have been developed, and are available, for most steel construction applications, to a metal thickness of 1/2”. This type of fastener is manufactured with its own integral drill point, which is engineered to drill the optimum hole size to facilitate efficient thread forming in the metal structure, resulting in optimized pullout values.

**Ultimate* Pull-over Performance**

The ability of a fastener to resist the pulling of the fastened sheet material over the head of the fastener due to gravity, wind, or other load.

The resistance to pullover failure is related to the strength and diameter of the fastener washer and the strength and thickness of the metal panel.

*All values listed herein are ultimate load failure values; no characteristic values are presented, nor have any safety factors been applied.
Proper Installation Tools

The selection of proper tools for the fastening of panels is critical for the ease of installation, proper watertight sealing, and the integrity of the connection.

Screw Guns
The correct choice of the screw gun is essential to ensure the fastener can perform properly. A battery powered or corded screw gun with the proper rpm speed is recommended.

<table>
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<th>Application</th>
<th>RPM Speed</th>
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<tr>
<td>Panels to wood</td>
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<tr>
<td>Panels to metal - self-drill</td>
<td>2,000</td>
</tr>
<tr>
<td>Panels to metal - self-tap</td>
<td>1,000</td>
</tr>
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</table>

The use of higher speed guns for wood applications can result in overtightening or stripping out the fastener. Attempting to install self-drill fasteners into steel substrates with faster guns can result in fastener failure due to the points burning up.

Impact guns are NOT recommended for fastening panels. With the higher torque produced by these guns, fasteners can be easily over driven to the point of the washer being over tightened or the fastener breaking. Additionally, the impacting action can cause excessive paint damage to the fastener heads and thread strip out.

Drive Sockets
Hex drive sockets with a recessed magnet, set to the proper depth, and a lobular design can help to reduce damage to the painted fastener head and increase stability during driving. SFS drive sockets have magnets set to a precise depth to ensure a correct fit. The installer should make sure the outer edge of the socket is resting firmly on the washer face of the fastener head for the most stable drilling performance.

Fastener Installation - Water Tightness
In order to ensure long term integrity of a building structure, achieving water tightness in the connection of exterior metal panels is critical and essential in the installation. It is important to install fasteners so the washer is properly seated, allowing the EPDM sealing material to seal and perform as intended. Both over tightening and under tightening can lead to water leaks. The use of a depth setting nosepiece is always recommended.
Application

SFS intec developed the vistaCoat Premium System finish for panel attachment fasteners. Utilizing new coating and processing technology, the finish has improved appearance, corrosion resistance, durability, and installation performance.

The finish system consists of:
- pre-treatment
- seal coat
- color top coat
- zinc plating
- primer coat

vistaCoat Premium System is standard on the following exterior panel attachment fasteners in any of the SFS standard colors and plain silver:

**Post Frame**
- #9 woodGrip controlSeal
- #10 woodGrip HiLo bondSeal
- #12 woodGrip XG controlSeal
- #14 Type A-MP bondSeal

**Metal Frame**
- #12 Stitch SP
- #10 woodZAC
- #9 woodMAC
- #14 x 7/8” Sealer Lap

Performance

**Corrosion Resistance** - on all plain and color product
- Kesternich per DIN 50.018 – 2.0 liter - 15 cycles
- Salt Spray per ASTM B117 – 1,000 hrs.

**Consistent Durability**
- Adhesion
- Impact resistance
- Appearance – gloss and color; application processes ensure consistent results

**UV Resistance**
- New superior UV-resistant pigmentation
- Results exceed previous market offerings in gloss retention and color stability

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<th>White</th>
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<td>348 Bone White</td>
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<td>818 Sierra White</td>
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<td>023 Black</td>
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# Fastener Type

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<tr>
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<tr>
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<td>Pipe Flash Round</td>
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<td>PFRRZ</td>
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### Legend - Understanding the Product Code

#### Material Type
- **S3**  Stainless 300 series
- **S4**  Stainless 400 series

#### Head Type
- **CHWx/x**  Cupped Hex Washer Head
- **CS**  Countersunk
- **F**  Flat Head
- **HWx/x**  Hex Washer Head
- **Hx/x**  Hex Head
- **IH**  irius Head
- **LP**  Low Profile Head
- **PC**  Pancake Head
- **PN**  Pan Head
- **WF**  Wafer Head

#### Drive
- **PHx**  Phillips
- **PSQx**  Phillips Square 2/2
- **SQx**  Square
- **Txx**  TORX®

#### Fastener Type
- **WG**

#### Dimensions
- #9x1-1/2

#### Washer Type & OD
- **CS1/2**
- **GB19/32**

#### Coating Type & Color Code
- **V0248**
- **S0850**

#### Packaging
- **F**

---

**#9 woodGrip, 1-1/2” Length, 1/2” controlSeal, vistaCoat Light Stone, 250/bag**

<table>
<thead>
<tr>
<th>Fastener Type</th>
<th>Dimensions</th>
<th>Washer Type &amp; OD</th>
<th>Coating Type &amp; Color Code</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>WG</td>
<td>#9x1-1/2</td>
<td>CS1/2</td>
<td>V0248</td>
<td>F</td>
</tr>
</tbody>
</table>

**#12 Self-Drill, 2Pt., 1-1/4” Length, 5/16 Hex Washer Head, 19/32 Galvanized Bonded Washer, Spray Evergreen, 250/bag**

<table>
<thead>
<tr>
<th>Fastener Type</th>
<th>Dimensions</th>
<th>Head Type &amp; OD</th>
<th>Washer Type &amp; OD</th>
<th>Coating Type &amp; Color Code</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD2</td>
<td>#12x1-1/4</td>
<td>HW5/16</td>
<td>GB19/32</td>
<td>S0232</td>
<td>F</td>
</tr>
</tbody>
</table>

**#12 ZAC Self-Drill, 2 Pt., 1-1/2” Length, 3/8” Cupped Hex Washer Head, Neoprene Sealer Washer, Spray Ash Gray, 250/bag**

<table>
<thead>
<tr>
<th>Fastener Type</th>
<th>Dimensions</th>
<th>Head Type &amp; OD</th>
<th>Washer Type</th>
<th>Coating Type &amp; Color Code</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZSD2</td>
<td>#12x1-1/2</td>
<td>CHW3/8</td>
<td>N</td>
<td>S0850</td>
<td>F</td>
</tr>
</tbody>
</table>

**Material Type**
- **S3**  Stainless 300 series
- **S4**  Stainless 400 series

**Washer**
- **ABx/x**  Aluminum Bonded Washer
- **CSx/x**  controlSeal Washer
- **GBx/x**  Galvanized Bonded Washer
- **N**  Neoprene Seal Washer
- **SBx/x**  Stainless Bonded Washer
- **SCSx/x**  Stainless controlSeal Washer

**Coating**
- **Vxxxx**  vistaCoat® and 4-digit color code
- **Sxxxx**  Spray and 4-digit color code
- **Exxxx**  E-Coat and color code

**Packaging**
- **B**  Bulk in cartons or pails
- **F**  250/bag
- **C**  100/bag
**woodGrip™ Fasteners**

**woodGrip** is the original sheet to wood fastener designed to self-drill metal panels:
- High Hex Washer Head provides driving stability and a sharp point for quick installation.
- Assembled with a controlSeal washer for a consistent, weather tight seal and improved installation appearance.
- Corrosion resistant coating system.

**woodGrip XG** is a sheet to wood fastener designed to self-drill metal panels:
- Superior performance in OSB, plywood and 1x4 pine.
- Superior resistance to stripout.
- Extra aggressive thread design.
- Improved pullout and backout values over other wood screws by as much as 30%.
- Corrosion resistant coating system.

**woodGrip # 14 Type A** milled point carbon steel self-tapping fasteners are designed for attaching both metal to wood and metal to metal:
- These fasteners do not require a pre-drilled hole when attaching 26 and 24 gage metal to wood.
- Corrosion resistant coating system.

**woodGrip HiLo** is a sheet to wood fastener designed to self-drill metal panels:
- High Hex Washer Head provides driving stability and a milled point for quick installation.
- Assembled with a bondSeal washer for a consistent, weather tight seal and improved installation appearance.
- Corrosion resistant coating system.

**woodGrip Low Profile** is a sheet to wood fastener designed to self-drill metal panels:
- Low profile head for pleasing appearance.
- Milled point ensures great drill performance.
- HiLo thread with added pull-out resistance.
- Available with bondSeal for exterior sidewall application or no washer for interior applications.
- Corrosion resistant coating system.

---

**Application**

<table>
<thead>
<tr>
<th>9–15 woodGrip HWH</th>
<th>10–15 woodGrip HiLo</th>
<th>12–8 woodGrip XG HWH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sharp Point</strong></td>
<td><strong>HWH Milled Point</strong></td>
<td><strong>Sharp Point</strong></td>
</tr>
<tr>
<td>Assembled controlSeal</td>
<td>Assembled bondSeal</td>
<td>Assembled controlSeal</td>
</tr>
<tr>
<td><strong>Metal to wood</strong></td>
<td><strong>Metal to wood</strong></td>
<td><strong>Metal to wood</strong></td>
</tr>
</tbody>
</table>

**Drilling capacity:** 24 ga (.024)

Self-drills through the metal panel and taps into wood substrate.

Min penetration in wood substrates should be no less than 1”

---

**Strength (lbs ult.):**

- Tensile: 1751
- Torsional: 60 in-lbs min.
- Shear: 1223

---

**Notes**

Dimensions are nominal inches unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

---

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### Application

**12 x 3/4 woodGrip Lap**

Assembled bondSeal or controlSeal Panel to panel side lap

Drilling capacity: 2 x 24 ga

Panel to panel side lap, end lap and other stitch applications

1/4" Hex Washer Head:
- Thread Major Dia.: .215 – .208
- Thread Minor Dia.: .164 – .157
- **Strength (lbs ult.):**
  - Tensile: 2100
  - Torsional: 92 in-lbs min.
  - Shear: 1800

---

**10-15 woodGrip Low Profile HiLo**

Assembled bondSeal Exterior Sidewall Fastener

Drilling capacity: 24 ga (.024)

Self-drills through the metal panel and taps into wood substrate. Min penetration in wood substrates should be no less than 1”

T25 TORX® Pan Head:
- Thread Major Dia.: .199 - .191
- Thread Minor Dia.: .133 - .127
- **Strength (lbs ult.):**
  - Tensile: 1751
  - Torsional: 60 in-lbs min.
  - Shear: 1223

---

**10-15 woodGrip Low Profile HiLo**

No Washer Interior Liner Panel

Drilling capacity: 24 ga (.024)

Self-drills through the metal panel and taps into wood substrate. Min penetration in wood substrates should be no less than 1”

Available painted white only.

T25 TORX® Pan Head:
- Thread Major Dia.: .199 - .191
- Thread Minor Dia.: .133 - .127
- **Strength (lbs ult.):**
  - Tensile: 1751
  - Torsional: 60 in-lbs min.
  - Shear: 1223

---

**#14 Type A Milled Point**

Assembled bondSeal Metal to wood

Self-drilling metal thickness:
- Sheet: .018 – .030
- Thickness is based on normal, single or multiple material thickness combined for total.
- Min depth penetration into the wood sub structure: 1”

5/16” AF Hex Washer Head
- Thread Major Dia.: .254 – .248
- Thread Minor Dia.: .185 – .178
- **Strength (lbs ult.):**
  - Tensile: 3500
  - Torsional: 125 in-lbs
  - Shear: 2400

---

### Notes

Dimensions are nominal inches unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

---

Continued on following page
Performance Pounds Ultimate

<table>
<thead>
<tr>
<th>Description</th>
<th>Pull-out (lbs ult.)</th>
<th>Pull-over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wood: SPF</td>
<td></td>
</tr>
<tr>
<td>#9 woodGrip controlSeal</td>
<td>1-1/2&quot; Penetration</td>
<td>748</td>
</tr>
<tr>
<td></td>
<td>1&quot; Penetration</td>
<td>542</td>
</tr>
<tr>
<td>#10 woodGrip HiLo bondSeal</td>
<td>1-1/2&quot; Penetration</td>
<td>820</td>
</tr>
<tr>
<td></td>
<td>1&quot; Penetration</td>
<td>524</td>
</tr>
<tr>
<td>#10 woodGrip Low Profile bondSeal</td>
<td>1-1/2&quot; Penetration</td>
<td>820</td>
</tr>
<tr>
<td>No Washer</td>
<td>1&quot; Penetration</td>
<td>524</td>
</tr>
<tr>
<td>#14 Type A Milled Point bondSeal</td>
<td>1&quot; Penetration</td>
<td>1013</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Pull-out (lbs ult.)</th>
<th>% Increase Strip-out vs. woodGrip (in-lbs)</th>
<th>Pull-over</th>
</tr>
</thead>
<tbody>
<tr>
<td>#12 woodGrip XG controlSeal</td>
<td>SPF 1&quot; Penetration</td>
<td>583</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>SPF 1-1/2&quot; Penetration</td>
<td>1029</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>1x4&quot; Pine</td>
<td>590</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>3/4&quot; Plywood</td>
<td>583</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>5/8&quot; Plywood</td>
<td>368</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>1/2&quot; Plywood</td>
<td>357</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>23/32&quot; OSB</td>
<td>412</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>19/32&quot; OSB</td>
<td>336</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>15/32&quot; OSB</td>
<td>225</td>
<td>17</td>
</tr>
</tbody>
</table>

Notes

- woodGrip and HiLo pull-out strength values may vary from tested loads depending upon specific wood density variations. woodGrip and HiLo pull-over strength values are based on .035" thick controlSeal or bondSeal washer and have been updated to reflect common tensile strengths of metal panels as a function of panel thicknesses.
- TORX® pan head HiLo pull-out strength values may vary from tabulated loads depending upon specific wood density variations. Pull over strength values are based on ½" nominal OD TORX® head and AZ55 Galvalume steel material.
- Percent increase strip-out values of the woodGrip XG over the standard woodGrip are typical results, as encountered when fasteners are installed at 2500 rpm until full strip-out occurs.
- Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fastener.
- Fasteners installed in less than 1" of solid wood may have an increased potential for sealing or connection failure over time. This may be due to the fasteners being stripped out during installation and/or due to the lack of adequate wood fiber material to hold the fastener in place during thermal movement cycles or other forces which may be exerted upon the connection.
- #9 and #10 woodGrips are not recommended in applications of less than 1" of wood.
- Test values obtained from lab reports 4899.12, 4954.12, 4381.07

Continued on following page
Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Example Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>#9-15 woodGrip controlSeal</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;, 2-1/2&quot;, 3&quot;</td>
<td>WG- #9x L- – CS1/2</td>
</tr>
<tr>
<td>#10-15 HiLo woodGrip bondSeal</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;, 2-1/2&quot;, 3&quot;</td>
<td>WGHLM- #10x L- – GB1/2</td>
</tr>
<tr>
<td>#12-8 woodGrip XG controlSeal</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;, 2-1/2&quot;, 3&quot;</td>
<td>WGXG- #12x L- – CS1/2</td>
</tr>
<tr>
<td>#12 Lap controlSeal</td>
<td>3/4&quot;</td>
<td>WGL- #12x L- – CS1/2</td>
</tr>
<tr>
<td>#12 Lap bondSeal</td>
<td>3/4&quot;</td>
<td>WGL- #12x L- – GB1/2</td>
</tr>
<tr>
<td>#10-15 Exterior Low Profile Sidewall</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;</td>
<td>WGLPMP- #10x L- PN-T25- GB1/2</td>
</tr>
<tr>
<td>#10-15 Interior Liner Panel No Washer, White</td>
<td>1&quot;</td>
<td>WGLP- #10x L- PN-T25- –</td>
</tr>
<tr>
<td>#14 Type A Milled Point bondSeal</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;, 2-1/2&quot;, 3&quot;</td>
<td>TAMP- #14x L- HW5/16- GB19/32</td>
</tr>
</tbody>
</table>

Installation

Tools: 0 – 2500 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

Options

vi staCoat® Painted
everGrip® stainless wood fastener is designed to self-drill metal panels:
- Head and the majority of shank is 300 Series Stainless Steel, with a welded, hardened carbon steel point for self-drilling performance.
- Provides the corrosion protection of stainless with the drill performance of a carbon steel fastener.

### Application

**everGrip® 300 Series Stainless Fasteners**

#### everGrip®

**9–15 HWH Sharp Point**

- **Assembled Stainless bondSeal**
- **Metal to wood**

Drilling capacity: 24 ga (0.024)

Self-drills through the metal panel and taps into wood substrate.

Min penetration in wood substrates should be no less than 1”

---

**everGrip®**

**9–15 T-25 (TORX®) Pan Head**

- **Assembled Stainless bondSeal**
- **Metal to wood**

Drilling capacity: 24 ga (0.024)

Self-drills through the metal panel and taps into wood substrate.

Min penetration in wood substrates should be no less than 1”

---

### Notes

Dimensions are nominal inches unless noted. Pull out strength values may vary from tabulated loads depending upon specific wood density variations. Pull over strength values are based on AZ55 Galvalume steel material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied.

Fasteners installed in less than 1” of solid wood may have an increased potential for sealing or connection failure over time. This may be due to the fasteners being stripped out during installation and/or due to the lack of adequate wood fiber material to hold the fastener in place during thermal movement cycles or other forces which may be exerted upon the connection.

### Performance Pounds Ultimate

<table>
<thead>
<tr>
<th>Description</th>
<th>Pull-out (lbs ult.) Wood: Spruce, Pine, Fir</th>
<th>Pull-over</th>
</tr>
</thead>
<tbody>
<tr>
<td>everGrip® Stainless bondSeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-1/2’ Penetration</td>
<td>748</td>
<td>29 ga: 378</td>
</tr>
<tr>
<td>1’ Penetration</td>
<td>542</td>
<td>26 ga: 519</td>
</tr>
</tbody>
</table>

Continued on following page
Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Example Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>#9-15 everGrip® HWH bondSeal</td>
<td>1”, 1-1/2”, 2”, 2-1/2”</td>
<td>BM-S3-#9x</td>
</tr>
<tr>
<td>250/bag</td>
<td></td>
<td>L-HW1/4-</td>
</tr>
<tr>
<td>#9-15 everGrip® HWH bondSeal</td>
<td>1”, 1-1/2”, 2”, 2-1/2”</td>
<td>BM-S3-#9x</td>
</tr>
<tr>
<td>100/box</td>
<td></td>
<td>L-HW1/4-</td>
</tr>
<tr>
<td>#9-15 everGrip® T-25 Pan Head bondSeal</td>
<td>1”, 1-1/2”, 2”, 2-1/2”, 3”</td>
<td>BM-S3-#9x</td>
</tr>
<tr>
<td>250/bag</td>
<td></td>
<td>L-PN-T25-</td>
</tr>
</tbody>
</table>

Installation Tool: #514261 SFS Special T-25 TORX Drive Bit – T25-50-HEX1/4*

Installation

Tools: 0 – 2500 rpm screw gun equipped with depth sensing nose piece.

Utilizing the special SFS T-25 Torx drive bit manufactured by SFS intec is recommended for superior stability during the installation process.
Use of impact guns or hammer drills is not recommended.

Options

Painted
Stainless, Aluminum Panel woodGrip is an all stainless steel fastener designed for use with aluminum panels:
- Fastener is 304 stainless steel for corrosion protection.
- High hex washer head provides driving stability and a sharp point for quick installation into aluminum.
- Will not drill steel panels.

Application

Stainless Aluminum Panel woodGrip
9–15 HWH Sharp Point
Assembled aluminum bondSeal
Metal to wood
Drilling capacity: .032” Aluminum
Max Self-drills through aluminum panel and taps into wood substrate.
Min penetration in wood substrate should be no less than 1”

Notes
Dimensions are nominal inches unless noted. Pull out strength values may vary from tabulated loads depending upon specific wood density variations. The specific job conditions should be considered and appropriate safety factors applied. Stainless woodGrips are not designed to self-drill steel panels.
Fasteners installed in less than 1” of solid wood may have an increased potential for sealing or connection failure over time. This may be due to the fasteners being stripped out during installation and/or due to the lack of adequate wood fiber material to hold the fastener in place during thermal movement cycles or other forces which may be exerted upon the connection.

Performance Pounds Ultimate

<table>
<thead>
<tr>
<th>Description</th>
<th>Pull-out (lbs ult.) Wood: Spruce, Pine, Fir</th>
</tr>
</thead>
<tbody>
<tr>
<td>#9-15 304SS Aluminum Panel woodGrip bondSeal</td>
<td>1-1/2” Penetration: 748</td>
</tr>
<tr>
<td></td>
<td>1” Penetration: 542</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
<tr>
<td>#9-15 304SS Aluminum Panel woodGrip</td>
</tr>
</tbody>
</table>

Installation
Tools: 0 – 2500 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

Options
Painted
woodZAC has all the performance features of standard woodGrip fasteners, plus a zinc alloy cap that can never red rust:
- 5/16" AF high Hex Washer Head for driving stability and a sharp point for quick installation.
- Assembled with sealing washers for weather tight seal.

woodMAC HiLo has all the performance features of standard woodGrips:
- 1/4" AF 300 series stainless capped HWH for a low profile head appearance that can never rust.
- Assembled with EPDM sealing washers for weather tight seal

Application

10–15 woodZAC HiLo
HWH Mill Point
Assembled aluminum bondSeal
Metal to wood
Drilling capacity: 24 ga (.024)
Self-drills through the metal panel and taps into wood substrate. Min penetration in wood substrates should be no less than 1".

5/16" AF Zinc Alloy Capped
Hex Washer Head
Thread Major Dia.: .199 – .191
Thread Minor Dia.: .133 – .127
Strength (lbs ult.):
Tensile: 1751
Torsional: 60 in-lbs min.
Shear: 1223

12–8 woodZAC XG
HWH Sharp Point
Assembled EPDM washer
Metal to Wood
Drilling capacity: 24 ga (.024)
Self-drills through the metal panel and taps into wood substrate. Min penetration in wood substrates should be no less than 1"

5/16" AF Zinc Alloy Capped
Hex Washer Head
Thread Major Dia.: .215 – .209
Thread Minor Dia.: .133 – .127
Strength (lbs ult.):
Tensile: 1751
Torsional: 60 in-lbs min.
Shear: 1223

12 x 3/4" woodZAC
LAP Sharp Point
Assembled EPDM washer
Panel to panel side lap
Panel to panel side lap, end lap and other stitch applications

5/16" AF Zinc Alloy Capped
Hex Washer Head
Thread Major Dia.: .215 – .208
Thread Minor Dia.: .164 – .157
Strength (lbs ult.):
Tensile: 2100
Torsional: 92 in-lbs min.
Shear: 1800

1/4-14 ZAC Type AB
Milled Point
Assembled EPDM washer
Metal to metal
Metal to wood
Self-drilling metal thickness:
Sheet .018 – .030
Thickness is based on normal, single or multiple material thickness combined for total.
Min depth penetration into the wood sub structure: 1"

3/8" AF Zinc Alloy Capped
Hex Washer Head
Thread Major Dia.: .246 – .240
Thread Minor Dia.: .192 – .185
Strength (lbs ult.):
Tensile: 3800
Torsional: 142 in-lbs
Shear: 2500

Notes
Dimensions are nominal inches unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Continued on following page
Application

10–15 woodMAC HWH Mill Point Assembled EPDM washer Metal to wood
Drilling capacity: 24 ga (.024)
Self-drills through the metal panel and taps into wood substrate.
Min penetration in wood substrates should be no less than 1”

Notes
Dimensions are nominal inches unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

woodGrip and woodZAC pull out strength values may vary from tabulated loads depending upon specific wood density variations. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Fasteners installed in less than 1" of solid wood may have an increased potential for sealing or connection failure over time. This may be due to the fasteners being stripped out during installation and/or due to the lack of adequate wood fiber material to hold the fastener in place during thermal movement cycles or other forces which may be exerted upon the connection.

Test values obtained from lab reports 4899.12, 4964.12, 4381.07

Performance Pounds Ultimate

<table>
<thead>
<tr>
<th>Description</th>
<th>Pull-out (lbs ult.) Wood: Spruce, Pine, Fir</th>
<th>Pull-over</th>
</tr>
</thead>
<tbody>
<tr>
<td>#10 woodZAC HiLo Aluminum bondSeal</td>
<td>1-1/2&quot; Penetration 820</td>
<td>29 ga: 577</td>
</tr>
<tr>
<td></td>
<td>1&quot; Penetration 524</td>
<td>26 ga: 637</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24 ga: 800</td>
</tr>
<tr>
<td>#10 woodMAC HiLo EPDM Washer</td>
<td>1-1/2&quot; Penetration 820</td>
<td>29 ga: 380</td>
</tr>
<tr>
<td></td>
<td>1&quot; Penetration 524</td>
<td>26 ga: 500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24 ga: 710</td>
</tr>
<tr>
<td>1/4-14 ZAC Type AB EPDM Washer</td>
<td>1&quot; Penetration 1013</td>
<td>26 ga: 600</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24 ga: 866</td>
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<tr>
<td></td>
<td></td>
<td>22 ga: 1094</td>
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</tbody>
</table>

Performance Pounds Ultimate

<table>
<thead>
<tr>
<th>Description</th>
<th>Pull-out (lbs ult.)</th>
<th>Strip Out* (in lbs)</th>
<th>Pull-over</th>
</tr>
</thead>
<tbody>
<tr>
<td>#12 woodZAC XG EPDM Washer</td>
<td>SPF 1&quot; Penetration 583</td>
<td>68</td>
<td>26 ga (70 ksi): 637</td>
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<tr>
<td></td>
<td>SPF 1-1/2&quot; Penetration 1029</td>
<td>79</td>
<td>29 ga (110 ksi): 577</td>
</tr>
<tr>
<td></td>
<td>1 x 4&quot; Pine 590</td>
<td>51</td>
<td>24 ga (70 ksi): 800</td>
</tr>
<tr>
<td></td>
<td>3/4&quot; Plywood 583</td>
<td>65</td>
<td>–</td>
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<td>5/8&quot; Plywood 368</td>
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<td>1/2&quot; Plywood 357</td>
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<td>15/32&quot; OSB 225</td>
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</table>

* Strip-out values were determined by the dynamic strip-out test, wherein fasteners were driven through a 24 gage panel into the applicable substrate at 2500 rpm until stripout occurred. The strip-out values listed above represent the average maximum strip-out measured by the digital data acquisition system when the fastener was driven into the given substrate.
Selection

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<th>Description</th>
<th>Available Lengths (L)</th>
<th>Example Code</th>
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<td>ZSDL- #12x 3/4- CHW5/16- N</td>
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<td>#10-15 woodMAC HiLo EPDM Washer</td>
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<td>ZTABMP- #14x 1-1/4- CHW3/8- N</td>
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</tbody>
</table>

Installation

Tools: 0 – 2500 rpm screw gun equipped with depth sensing nose piece.

Use of impact guns or hammer drills is not recommended.

Options

vistoCoat®  Painted

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guarantees or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.
Impax™ — Performance Self-Drill

- Precision cold forged assuring superior point strength and the fastest drilling time performance through high strength steel and nested purlins.
- Ultimate performance in light, medium and heavy gage applications.
- Designed and engineered to have low driving and thread engagement torque and provide maximum clamp load.
- Corrosion resistant coating system.

Application

12-14 Impax SD3
Assembled bondSeal
Metal to metal
Drilling capacity: .035 – .210"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total. Min projection: 3/16" of threads below substrate.

1/4-14 Impax Lap
Assembled bondSeal
Panel to panel side lap
Drilling capacity: .030 – .095"
Some applications may require attaching light gage (24 – 26 ga) to sub-structural member. Composite thickness should not exceed .095".

Notes
Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull-out values are based on 40,000 psi AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing (ISO8314). The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners. #12 fasteners 1" and longer have special long pilot lengths to accommodate nested purlins.

Selection

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<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Type</th>
<th>Diameter</th>
<th>Length</th>
<th>Head Style</th>
<th>Washer</th>
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<td>#12x</td>
<td>L-</td>
<td>HW5/16-</td>
<td>GB19/32</td>
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<td>#12-14 Impax SD3 No Washer</td>
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<td>L-</td>
<td>HW5/16-</td>
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</tr>
</tbody>
</table>

Example Code

Installations
Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece. Use of impact guns or hammer drills is not recommended.

Options

- Painted
- vistaCoat® Painted

<table>
<thead>
<tr>
<th>Options</th>
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<tbody>
<tr>
<td>vistaCoat® Premium System</td>
<td>Painted</td>
</tr>
</tbody>
</table>

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Application

12-24 Impax SD4.5
Assembled bondSeal
Metal to metal
Drilling capacity: .075 – .375"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Full Diameter Thread length: 12-24 x 1-1/4": .520
Min projection: 3/16" of threads below substrate

12-24 Impax SD5
Assembled bondSeal
Metal to metal
Drilling capacity: .075 – .500"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness.
Full Diameter Thread length: 12-24 x 1-1/4": .520
12-24 x 1-1/2": .770
12-24 x 2": 1.020
Min projection: 3/16" of threads below substrate

Notes
Dimensions are nominal inches unless noted. Self-drill pull out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Type</th>
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<tr>
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<td>#12x</td>
<td>L-</td>
<td>HW5/16-</td>
<td>GB19/32</td>
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<tr>
<td>#12-24 Impax SD5 No Washer</td>
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<td>SD5-</td>
<td>#12x</td>
<td>L-</td>
<td>HW5/16-</td>
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</tbody>
</table>

Installation
Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.
Impax™ – Sealer – Drill Screws

**Application**

**12-14 Impax Sealer SD3**
Assembled EPDM washer
Metal to metal
Drilling capacity: .035 – .210”
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total. Min projection: 3/16” of threads below substrate

**1/4-14 Impax Sealer Lap**
Assembled EPDM washer
Panel to panel side lap
Drilling capacity: .030 – .095”
Some applications may require attaching light gage (24 – 26 ga) to sub-structural member. Composite thickness should not exceed .095”.

**Notes**
Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull-out values are based on 40,000 psi AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing (ISO8314). The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners. #12 fasteners 1” and longer have special long pilot lengths to accommodate nested purlins.

**Selection**

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<tr>
<th>Description</th>
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<td>L-</td>
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**Installation**
Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

**Options**

VistaCoat®

VistaCoat® PREMIUM SYSTEM

Painted
Impax™ – 1/4” Drill Screws

- Precision cold forged assuring superior point strength and the fastest drilling time performance through high strength steel and nested purlins.
- Impax #2 point is designed with a reduced drill point diameter to provide higher pullout in single purlin attachment.

- Delivers ultimate performance in medium and heavy gage applications.
- Designed and engineered to have low driving and thread engagement torque and provide maximum clamp load.
- Corrosion resistant coating system.
- Designed for insulated metal panel application

Application

1/4-14 Impax SD2 & SD3
Assembled bondSeal Metal to metal
Drilling capacity:
#2 point: .050 – .150"
#3 point: .050 – .210"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Min projection: 3/16” of threads below substrate

1/4-20 Impax SD5
Assembled bondSeal Metal to metal
Drilling capacity: .105 – .500”
Thickness is based on normal, single thickness girt or multiple material thickness combined for total.
Min projection: 3/16” of threads below substrate

Notes
Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Continued on following page
Selection

<table>
<thead>
<tr>
<th>Description</th>
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<td>L-</td>
<td>HW3/8-</td>
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Installation

Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.

Use of impact guns or hammer drills is not recommended.

Options

Painted

Example Code

| SD5- | #14x | L- | HW3/8- | GB19/32 |
**Application**

### 8-18 Impax SD2

**Assembled bondSeal**

Drilling capacity: .035-.100"

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

Min projection: 3/16” of threads below substrate

### 10-16 Impax SD3

**Assembled bondSeal**

Drilling capacity: .035-.176"

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

Min projection: 3/16” of threads below substrate

**Notes**

Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

**Selection**

<table>
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<th>Description</th>
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<td>L-</td>
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<td>SDU-</td>
<td>#8x</td>
<td>L-</td>
<td>HW1/4-</td>
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<tr>
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<td>L-</td>
<td>HW5/16-</td>
<td>GB1/2</td>
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<tr>
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<td>SDU-</td>
<td>#10x</td>
<td>L-</td>
<td>HW5/16-</td>
<td>–</td>
</tr>
</tbody>
</table>

**Installation**

Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.

*Use of impact guns or hammer drills is not recommended.*

**Options**

*Painted*
410 SS is a magnetic heat-treatable stainless steel.

Type 410 self-drilling fasteners provide fair resistance to corrosion in mild to light industrial environments.

**Application**

**12-14 Stainless SD3**
Assembled Aluminum bondSeal
Metal to metal

Drilling capacity: .035 – .210”
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Min projection: 3/16” of threads below substrate

**1/4-14 Stainless Lap**
Assembled Aluminum bondSeal
Panel to panel side lap

Drilling capacity: .030 – .095”
Some applications may require attaching light gage (24 – 26 ga) to sub-structural member. Composite thickness should not exceed .095”.

**Notes**
Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull-out values are based on 40,000 psi AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners. #12 fasteners 1” and longer have special long pilot lengths to accommodate nested purlins.

<table>
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<tr>
<th>Selection</th>
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<td>3/4”, 1”, 1-1/4”, 1-1/2”</td>
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<tr>
<td>1/4-14 Stainless Lap bondSeal</td>
<td>7/8”</td>
</tr>
<tr>
<td>1/4-14 Stainless Lap No Washer</td>
<td>7/8”</td>
</tr>
</tbody>
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**Installation**
Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

**Options**
Painted
ZAC: the most widely used zinc aluminum capped fastener in the industry.

- Precision cold forged assuring superior point strength and the fastest drilling time performance through high strength steel and nested purlins.

**Application**

**12-14 ZAC Impax SD3 (3/8" or 5/16")**

**Assembled EPDM washer**

- **Metal to metal**

  **Drilling capacity:** .035 – .210"

  **Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.**

  **Min projection:** 3/16" of threads below substrate.

**ZAC® Impax™**

3/8" or 5/16" AF Zinc Aluminum Capped

Hex Washer Head

Head Dia: .650"

Thread Major Dia: .215 – .209

Thread Minor Dia: .164 – .157

**Strength (lbs ult.):**

- Tensile: 2900
- Torsional: 92 in-lbs
- Shear: 2050

**Pull-out (lbs ult.):**

- 12 ga (.105): 1524
- 14 ga (.075): 901
- 16 ga (.060): 665

**Pull-over (lbs ult.):**

- 22 ga (.030): 1647
- 24 ga (.024): 1310
- 26 ga (.018): 794

**1/4-14 ZAC Impax Lap (3/8" or 5/16")**

**Assembled EPDM washer**

- **Panel to panel side lap**

  **Drilling capacity:** .030 – .095"

  **Some applications may require attaching light gage (24 – 26 ga) to sub-structural member. Composite thickness should not exceed .095" thickness.**

**ZAC® Impax™**

3/8" or 5/16" AF Zinc Aluminum Capped

Hex Washer Head

Head Dia: .650"

Thread Major Dia: .246 – .240

Thread Minor Dia: .192 – .185

**Strength (lbs ult.):**

- Tensile: 3800
- Torsional: 150 in-lbs
- Shear: 2850

**Pull-out (lbs ult.):**

- 22 ga (.030): 379
- 24 ga (.024): 304
- 26 ga (.018): 204

**12-14 ZAC Lap (3/8") SP**

**Assembled EPDM washer**

- **Panel to panel side lap**

  **Drilling capacity:** .030 – .060"

  **Self-piercing points are not designed for attaching light gage (24 – 26 ga) to sub-structural member.**

**ZAC® Impax™**

3/8" AF Zinc Aluminum Capped

Hex Washer Head

Head Dia: .650"

Thread Major Dia: .215 – .208

Thread Minor Dia: .164 – .157

**Strength (lbs ult.):**

- Tensile: 2100
- Torsional: 92 in-lbs
- Shear: 1800

**Pull-out (lbs ult.):**

- 22 ga (.030): 538
- 24 ga (.024): 430
- 26 ga (.018): 330

**Notes**

Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull-out values are based on 40,000 psi AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing (ISO8314). The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners #12 fasteners 1" and longer have special long pilot lengths to accommodate nested purlins.

Continued on following page
Alloy Capped Fasteners

ZAC 3/8” or 5/16” HWH
Zinc aluminum capped drill screws
For metal to metal

Application

1/4-14 ZAC Impax SD2 & SD3
Assembled EPDM Washer
Metal to metal

Drilling capacity:
#2 point: .050 – .150"
#3 point: .050 – .210"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Min projection: 3/16" of threads below substrate

Notes
Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull-out values are based on 40,000 psi AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners. #12 fasteners 1” and longer have special long pilot lengths to accommodate nested purlins.

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<th>Head Style</th>
<th>Washer</th>
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<td>#12x</td>
<td>1-1/2”</td>
<td>CHW3/8-</td>
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<td>1/4-14 ZAC Impax Lap 3/8” AF CHWH EPDM washer</td>
<td>7/8”</td>
<td>ZSDL-</td>
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<tr>
<td>#12-14 ZAC Lap Sharp Pt. 3/8” AF CHWH EPDM washer</td>
<td>3/4”</td>
<td>ZSDL-</td>
<td>#12x</td>
<td>L-</td>
<td>CHW3/8-</td>
<td>N</td>
</tr>
<tr>
<td>1/4-14 ZAC Impax SD2, 3/8” AF CHWH EPDM washer</td>
<td>1-1/4”, 1-1/2”</td>
<td>ZSD2-</td>
<td>#14x</td>
<td>L-</td>
<td>CHW3/8-</td>
<td>N</td>
</tr>
<tr>
<td>#12-14 ZAC Impax 5/16” AF CHWH EPDM washer</td>
<td>1”, 1-1/4”, 1-1/2”, 2”</td>
<td>ZSD3-</td>
<td>#12x</td>
<td>L-</td>
<td>CHW5/16-</td>
<td>N</td>
</tr>
<tr>
<td>1/4-14 ZAC Impax Lap 5/16” AF CHWH EPDM washer</td>
<td>7/8”</td>
<td>ZSDL-</td>
<td>#14x</td>
<td>L-</td>
<td>CHW5/16-</td>
<td>N</td>
</tr>
<tr>
<td>1/4-14 ZAC Impax SD3, 5/16” AF CHWH EPDM washer</td>
<td>1-1/4”</td>
<td>ZSD3-</td>
<td>#14x</td>
<td>L-</td>
<td>CHW5/16-</td>
<td>N</td>
</tr>
</tbody>
</table>

Installation
Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

Options
vistaCoat®
Painted

vistaCoat® Premium System
ZAC: the most widely used zinc aluminum capped fastener in the industry.

- Precision cold forged assuring superior point strength and the fastest drilling time performance through high strength steel and nested purlins.

- Designed and engineered to have low driving and thread engagement torque to prevent damage to the cap during installation while providing maximum clamp load.

- Integral cupped Hex Washer Head can never red rust.

**Application**

12-24 ZAC Impax SD4.5 & SD5 (3/8"

Assembled EPDM Washer

Metal to metal

ZAC Impax 4.5
Drilling capacity: .075 – .375"

ZAC Impax 5
Drilling capacity: .075 – .500"

Thickness is based on single thickness purlin/girt or multiple material thickness combined for total.

Full diameter thread length:
ZAC Impax 4.5: 12-24 x 1-1/4": .520
ZAC Impax 5: 12-24 x 1-1/4": .520
12-24 x 1-1/2": .770

Min projection: 3/16” of threads below substrate

**Notes**

Dimensions are nominal inches unless noted. Self-drill pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull-out values are based on 40,000 psi AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners #12 fasteners 1” and longer have special long pilot lengths to accommodate nested purlins.

**Selection**

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Type</th>
<th>Diameter</th>
<th>Length</th>
<th>Head Style</th>
<th>Washer</th>
</tr>
</thead>
<tbody>
<tr>
<td>#12-24 ZAC Impax SD4.5 CHWH EPDM washer</td>
<td>1-1/4”</td>
<td>ZSD45-</td>
<td>#12x</td>
<td>L-</td>
<td>CHW3/8-</td>
<td>N</td>
</tr>
<tr>
<td>#12-24 ZAC Impax SD5 CHWH EPDM washer</td>
<td>1-1/4”, 1-1/2”</td>
<td>ZSD5-</td>
<td>#12x</td>
<td>L-</td>
<td>CHW3/8-</td>
<td>N</td>
</tr>
</tbody>
</table>

**Installation**

Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.

*Use of impact guns or hammer drills is not recommended.*

**Options**

Painted
MAC™ Impax™ — 300 Series Stainless Capped

- MAC has a 300 series stainless steel capped, integral cupped Hex Washer Head configuration that can never red rust.
- Assembled with EPDM washer

Application

12-14 MAC Impax SD3
Assembled EPDM washer
Metal to metal

Drilling capacity: .035 – .210"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total, as in overlapped or nested purlin construction.
Min projection: 3/16" of threads below substrate

5/16" AF Stainless Capped
Hex Washer Head
Thread Major Dia: .215 – .209
Thread Minor Dia: .164 – .157

Strength (lbs ult.):
Tensile: 2900
Torsional: 92 in-lbs
Shear: 2050

Pull-out (lbs ult.):
12 ga (.105): 1524
14 ga (.075): 901
16 ga (.060): 665

Pull-over (lbs ult.):
22 ga (.030): 1298
24 ga (.024): 1102
26 ga (.018): 692

1/4-14 MAC Impax Lap
Assembled EPDM washer
Panel to panel side lap

Drilling capacity: .030 – .095"
Some applications may require attaching light gage (24 – 26 ga) to sub-structural member.
Composite thickness should not exceed .095" thickness.

5/16" AF Stainless Capped Hex Washer Head
Thread Major Dia: .246 – .240
Thread Minor Dia: .192 – .185

Strength (lbs ult.):
Tensile: 3800
Torsional: 150 in-lbs
Shear: 2850

Pull-out (lbs ult.):
22 ga (.030): 379
24 ga (.024): 304
26 ga (.018): 204

Notes
Dimensions are nominal inches unless noted. Self-drill pull out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull out values are based on 40,000 PSI AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing (5083.14). The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners. #12 fasteners 1" and longer have special long pilot lengths to accommodate nested purlins.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Type</th>
<th>Diameter</th>
<th>Length</th>
<th>Head Style</th>
<th>Washer</th>
</tr>
</thead>
<tbody>
<tr>
<td>#12-14 MAC Impax SD3 EPDM washer</td>
<td>1&quot;, 1-1/4&quot;, 1-1/2&quot;</td>
<td>MSD3-</td>
<td>#12x</td>
<td>L-</td>
<td>HW5/16-</td>
<td>N</td>
</tr>
<tr>
<td>1/4-14 MAC Impax Lap EPDM washer</td>
<td>7/8&quot;</td>
<td>MSDL-</td>
<td>#14x</td>
<td>L-</td>
<td>HW5/16-</td>
<td>N</td>
</tr>
</tbody>
</table>

Installation
Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

Options
Painted
ZAC® Tapping Fasteners

ZAC self-tapping fasteners: Type 17-AB milled point and Type AB
For metal to metal

- Integral cupped Hex Washer Head configuration can never red rust.
- Designed for attaching both metal to wood and metal to metal.

Type 17 milled points do not require a pre-drilled hole when attaching 26 and 24 gage metal to wood.

Application

1/4 -14 ZAC Type AB
Milled Point
Assembled EPDM washer
Metal to wood
Metal to metal
Self-Drilling Metal Thickness:
Sheet .018 – .030
Thickness is based on normal, single or multiple material thickness combined for total
Min depth penetration into the wood sub structure: 1”

#17 ZAC Type AB
Strip-out Repair
Assembled EPDM washer
Metal to metal
Repair fastener for stripped out #14 Type A or 1/4” AB
Min projection: 3/8” of threads below substrate

Notes
Dimensions are nominal inches unless noted. When using Milled point fasteners for metal to metal see the tapping screw section for performance values. Pull-out values (pounds ultimate) are based on 57,000 psi hot rolled steel material. Lap self-drill pull-out values are based on 40,000 psi AZ55 Galvalume steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Example Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4-14 ZAC Type AB CHWH EPDM washer</td>
<td>1”, 1-1/2”, 2”, 2-1/2”</td>
<td>ZTABMP- #14x L- CHW3/8- N</td>
</tr>
<tr>
<td>#17 ZAC Type AB CHWH EPDM washer</td>
<td>1”, 1-1/2”</td>
<td>ZTAB - #17x L- CHW3/8- N</td>
</tr>
</tbody>
</table>

Installation
Tools: Metal to metal application: 0 – 1000 rpm screw gun equipped with depth sensing nose piece.
Metal to wood application: 0 – 2500 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

Options

Painted
**Prisma™**

- Prisma nylon head does not corrode.
- Nylon head can withstand extreme installation torque without failure.
- Requires no special socket for installation.

- Special washer face allows the fastener to be used on sidewall without a sealing washer.
- Nylon heads are available in 90 standard colours.

## Application

### 1/4-14 SD3

**Metal to metal**

- Self-Drill:
  - 1/4-14 x 1”
  - 1/4-14 x 1-3/8”
  - 1/4-14 x 2”
- Drill capacity: .050 – .210”

### #14 Type AB

**Metal to metal**

- Self-Tapping AB:
  - 1/4-14 x 3/4”
  - 1/4-14 x 1-1/2”
  - 1/4-14 x 2”
  - 1/4-14 x 2-1/2”
- Stainless AB:
  - 1/4-14 x 3/4”

### 1/4-14 x 7/8 Lap

**Metal to metal**

- Panel to panel side lap drilling capacity: .030 – .095”
- Self-Drilling Metal Thickness:
  Thickness is based on normal, single or multiple material thickness combined for total.

### #10 woodGrip

**Metal to wood**

- 10 x 1”
- 10 x 1-1/2”
- 10 x 2”
- 10 x 2-1/2”
- 10 x 3”
- Min depth penetration into the wood sub structure: 1”

## Notes

Dimensions are nominal inches unless noted. For Type AB metal to metal, see tapping screw section for performance values.

## Installation

**Tools:**
- Metal to metal application, self-tapping: 0 – 1000 rpm screw gun equipped with depth sensing nose piece.
- Metal to metal application, self-drilling: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.
- Metal to wood application: 0 – 2500 rpm screw gun equipped with depth sensing nose piece.

**Use of impact guns or hammer drills is not recommended.**

---

**Options**

None
**Tapping Screws – Carbon Steel**

- Carbon steel zinc-plated self-tapping fasteners are the original metal construction fastener that can be used in metal to metal and metal to wood applications.
- Tapping screws are available in long lengths for specialty applications.

### Application

**#14 Type A**

**Assembled bondSeal**

**Metal to metal**

Attachment thickness: .044 – .075

<table>
<thead>
<tr>
<th>Metal thickness</th>
<th>Drill bit size</th>
</tr>
</thead>
<tbody>
<tr>
<td>.021 – .026</td>
<td>1/8 (.125)</td>
</tr>
<tr>
<td>.027 – .050</td>
<td>3/16 (.187)</td>
</tr>
<tr>
<td>.051 – .075</td>
<td>#8 (.199)</td>
</tr>
</tbody>
</table>

The hole size determines installation performance and pullout strength.

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

Min projection: 3/8” of threads below substrate

**#14 Type A**

**Milled Point**

**Assembled bondSeal**

**Metal to wood**

Self-drilling metal thickness:

Sheet .018 – .030

Thickness is based on normal, single or multiple material thickness combined for total.

Min depth penetration into the wood sub structure: 1”

**1/4 Type AB and B**

**Assembled bondSeal**

**Metal to metal**

Attachment thickness: .044 – .500

<table>
<thead>
<tr>
<th>Metal thickness</th>
<th>Drill bit size</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB .021 – .026</td>
<td>1/8 (.125)</td>
</tr>
<tr>
<td>AB .027 – .050</td>
<td>5/32 (.156)</td>
</tr>
<tr>
<td>AB .051 – .075</td>
<td>#8 (.199)</td>
</tr>
<tr>
<td>AB .075 – .110</td>
<td>#7 (.201)</td>
</tr>
<tr>
<td>B .065 – .085</td>
<td>#8 (.199)</td>
</tr>
<tr>
<td>B .085 – .115</td>
<td>#7 (.201)</td>
</tr>
<tr>
<td>B .115 – .375</td>
<td>#1 (.228)</td>
</tr>
<tr>
<td>B .375 – .500</td>
<td>#1 or larger, depending on hardness of steel</td>
</tr>
</tbody>
</table>

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

Min projection: 3/8” of threads below substrate

### Notes

Dimensions are nominal inches unless noted. Pull-out values (pounds ultimate) are based on 50,000 psi hot rolled steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Continued on following page
Application

#17 Type AB
Strip-out Repair
Assembled bondSeal
Metal to metal
Attachment thickness: .036 – .060
Min projection: 3/8" of threads below substrate

Notes
Dimensions are nominal inches unless noted. Pull-out values (pounds ultimate) are based on 50,000 psi hot rolled steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#14 Type A Milled Point bondSeal</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;, 2-1/2&quot;, 3&quot;</td>
</tr>
<tr>
<td>1/4-14 Type AB bondSeal</td>
<td>3/4&quot;, 1&quot;, 1-1/4&quot;, 1-1/2&quot;</td>
</tr>
<tr>
<td>1/4-14 Type B bondSeal</td>
<td>3/4&quot;, 1&quot;, 1-1/2&quot;, 2&quot;, 2-1/2&quot;, 3&quot;, 3-1/2&quot;, 4&quot;, 5&quot;, 6&quot;</td>
</tr>
<tr>
<td>#17 Type AB bondSeal</td>
<td>3/4&quot;, 1&quot;, 1-1/2&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ExampleCode</th>
<th>Type</th>
<th>Diameter</th>
<th>Length</th>
<th>Head Style</th>
<th>Washer</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA-  #14x L- H3/8- GB19/32</td>
<td>TA-</td>
<td>#14x</td>
<td>L</td>
<td>H3/8-</td>
<td>GB19/32</td>
</tr>
<tr>
<td>TAM- #14x L- HW5/16- GB19/32</td>
<td>TAM-</td>
<td>#14x</td>
<td>L</td>
<td>HW5/16-</td>
<td>GB19/32</td>
</tr>
<tr>
<td>TAB- #14x L- H3/8- GB19/32</td>
<td>TAB-</td>
<td>#14x</td>
<td>L</td>
<td>H3/8-</td>
<td>GB19/32</td>
</tr>
<tr>
<td>TAB- #17x L- H3/8- GB19/32</td>
<td>TAB-</td>
<td>#17x</td>
<td>L</td>
<td>H3/8-</td>
<td>GB19/32</td>
</tr>
</tbody>
</table>

Installation
Tools: 0 – 1000 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

Options

vistaCoot® Painted
Stainless steel zinc-plated self-tapping fasteners are designed for attaching metal to metal and metal to wood. Type B have wax surface treatment for added lubricity.

**Application**

### #14 Type A

304 Stainless

Assembled stainless bondSeal

**Metal to metal**

- Attachment thickness: .044 – .075
- Metal thickness Drill bit size
  - .021 – .026 1/8 (.125)
  - .027 – .050 3/16 (.187)
  - .051 – .075 #8 (.199)

The hole size determines installation performance and pullout strength. Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total. Min projection: 3/8" of threads below substrate

### 1/4-14 Type AB and B

304 Stainless

Assembled stainless bondSeal

**Metal to metal**

- Attachment thickness: .044 – .500
- Metal thickness Drill bit size
  - AB .021 – .026 1/8 (.125)
  - AB .027 – .050 5/32 (.156)
  - AB .051 – .075 #8 (.199)
  - AB .075 – .104 #7 (.201)
  - B .065 – .085 #8 (.199)
  - B .085 – .115 #7 (.201)
  - B .115 – .375 #1 (.228)
  - B .375 – .500 #1 or larger, depending on hardness of steel

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total. Min projection: 3/8" of threads below substrate

### #17 Type AB

304 Stainless

Strip-out Repair

Assembled stainless bondSeal

**Metal to metal**

Min projection: 3/8” of threads below substrate

Notes

Dimensions are nominal inches unless noted. Pull-out values (pounds ultimate) are based on 50,000 psi hot rolled steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Continued on following page
## Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>Example Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4-14 Type AB 304SS bondSeal</td>
<td>3/4&quot;, 1&quot;, 1-1/4&quot;, 1-1/2&quot;</td>
<td>TAB- S3- #14x L- H3/8- SB19/32</td>
</tr>
<tr>
<td>#17 Type AB 304SS bondSeal</td>
<td>3/4&quot;, 1&quot;, 1-1/2&quot;</td>
<td>TAB- S3- #17x L- H3/8- SB19/32</td>
</tr>
</tbody>
</table>

## Installation

Tools: 0 – 1000 rpm screw gun equipped with depth sensing nose piece.  
**Use of impact guns or hammer drills is not recommended.**

## Options

Painted
### Standing Seam Clips

- Engineered panel clips are custom designed and manufactured for your panel system.
- Clips are supplied in galvanized steel, coated steel, stainless steel and other materials.
- Engineered fixed and float clip designs are available.
- Standard clips are available from stock without tooling cost to you.

### Application – Snap Lock

#### Snap Lock Panel Design

Configurations require very low profile clip bases with a base feature to hold the panel above the low profile fastener heads.

#### Selection

<table>
<thead>
<tr>
<th>Material No.</th>
<th>Panel Clip</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1112979      | 1” Snap Lock (2-Hole) Clip | Material No.: 1112979  
G90 Galvanized: 18 ga.  
Packaged 200 per carton |
| 1051727      | 1-1/2” Snap Lock (2-Hole) Clip | Material No.: 1051727  
G90 Galvanized: 20 ga.  
Packaged 500 per carton |
| 1036000      | 1-1/2” Snap Lock (3-Hole) Clip | Material No.: 1036000  
G90 Galvalume: 24 ga.  
Packaged 1000 per carton |
| 1241358      | 1-5/8” Snap Lock (3-Hole) Clip | Material No.: 1241358  
G90 Galvanized: 18 ga.  
Packaged 500 per carton |
| 728734       | 1-3/4” Snap Lock (2-Hole) Clip | Material No.: 728734  
G90 Galvanized: 18 ga.  
Packaged 250 per carton |
| 728731       | 1-3/4” Snap Lock (1-Hole) Clip | Material No.: 728731  
G90 Galvanized: 18 ga.  
Packaged 500 per carton |

#### Engineered panel clips

- Sealant can be pre-applied to the clips to maintain the seal at the clip attachment.
- Clip design options are available for review and evaluation.
- All clips also available in stainless steel.

- Fixed Clips are primarily used with these panels. Low profile head fasteners should be used with these panels to provide clearance for the panel over the fastener heads. These clips are manufactured from steel, stainless steel and other materials with various finishes to fit the needs of the panel application.

### Roof Panel Clip

- Blanket Insulation
- Roof Purlin
- Low Profile Head Fastener
### Application – Snap Lock

**1-3/4" Snap Lock (3-Hole) Clip**
- **Material No.:** 1051721
  - G90 Galvanized: 18 ga. (.31 hook)
- **Material No.:** 1051718
  - G90 Galvanized: 20 ga. (.289 hook)
  
  Packaged 500 per carton

**BattenTrim (spider) Clip**
- **Material No.:** 728473
  - 304SS: (1/4 Hard): 22 ga.
- **Material No.:** 1324506
  - G90 Galvanized: 22 ga.
  
  Packaged 500 per carton

### Application – Architectural/Mechanical

#### Architectural/Mechanical Panel Design
Configurations require low profile bases with clearance for the fastener head.

#### Selection

<table>
<thead>
<tr>
<th>Fixed Clip</th>
<th>Material No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2&quot; Fixed Clip (.38 Hor.)</td>
<td>1085437</td>
<td>G90 Galvanized: 22 ga.</td>
</tr>
<tr>
<td>1-1/2&quot; Fixed Clip (.43 Hor.)</td>
<td>1093692</td>
<td>G90 Galvanized: 22 ga.</td>
</tr>
<tr>
<td>2&quot; Fixed Clip (.57 Hor.)</td>
<td>1213346</td>
<td>G90 Galvanized: 22 ga.</td>
</tr>
<tr>
<td>2&quot; Fixed Clip (.70 Hor.)</td>
<td>728753</td>
<td>G90 Galvanized: 22 ga.</td>
</tr>
<tr>
<td>2&quot; Fixed Clip (.70 Hor.)</td>
<td>1082064</td>
<td>G90 Galvanized: 22 ga.</td>
</tr>
</tbody>
</table>

Fixed and Float Clips are used with these panels. The clips may have pre-applied sealant to maintain the panel seal at the clip attachment point. These clips are manufactured from steel, stainless steel and other materials with various finishes to fit the needs of the panel application.

### Panel Clips, Bearing Plates and Fasteners

Continued on following page
### Standing Seam Clips

**Application – Architectural/Mechanical**

<table>
<thead>
<tr>
<th>Clip Type</th>
<th>Material No.</th>
<th>Material</th>
<th>Packaged</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2-3/8” Fixed Clip (.66 Hor.)</strong></td>
<td>728494</td>
<td>G90 Galvanized: 22 ga. Factory-applied sealant</td>
<td>200 per carton</td>
</tr>
<tr>
<td><strong>2-3/8” Fixed Clip (.70 Hor.)</strong></td>
<td>729720</td>
<td>G90 Galvanized: 22 ga. Factory-applied sealant</td>
<td>250 per carton</td>
</tr>
<tr>
<td><strong>3” Fixed Clip (.66 Hor.)</strong></td>
<td>728495</td>
<td>G90 Galvanized: 22 ga. Factory-applied sealant</td>
<td>200 per carton</td>
</tr>
<tr>
<td><strong>3” Fixed Clip (.70 Hor.)</strong></td>
<td>729720</td>
<td>G90 Galvanized: 22 ga. Factory-applied sealant</td>
<td>250 per carton</td>
</tr>
<tr>
<td><strong>3” Fixed Clip (.935 Hor.)</strong></td>
<td>728472</td>
<td>G90 Galvanized: 22 ga. with Factory-applied sealant</td>
<td>250 per carton</td>
</tr>
<tr>
<td><strong>1-1/2” Float Clip (.38 Hor.)</strong></td>
<td>1069208</td>
<td>G90 Galvanized: 22 ga. Tab Base: 16 ga.</td>
<td>80 per carton</td>
</tr>
<tr>
<td><strong>1-1/2” Float Clip (.65 Hor.)</strong></td>
<td>1183626</td>
<td>G90 Galvanized: 22 ga. Tab Base: 16 ga. Factory applied sealant</td>
<td>100 per carton</td>
</tr>
<tr>
<td><strong>2” Float Clip (.57 Hor.)</strong></td>
<td>1069206</td>
<td>G90 Galvanized: 22 ga. Tab Base: 16 ga.</td>
<td>80 per carton</td>
</tr>
</tbody>
</table>

*Continued on following page*
Application – Architectural/Mechanical

2” Float Clip (.70 Hor.)
Material No.: 753279
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Factory-applied sealant
Packaged 100 per carton

2” Float Clip (.66 Hor.)
Material No.: 728907
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Factory-applied sealant
Packaged 80 per carton

2” Float Clip (.70 Hor.)
Material No.: 728902
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Factory-applied sealant
Packaged 100 per carton

2” Float Clip (.71 Hor.)
Material No.: 1158556
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Factory-applied sealant
Packaged 100 per carton

2” Float Clip (.71 Hor.)
Material No.: 1020252
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Packaged 100 per carton

3” Float Clip (.70 Hor.)
Material No.: 728906
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Factory-applied sealant
Packaged 100 per carton

3” Float Clip (.66 Hor.)
Material No.: 728908
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Factory-applied sealant
Packaged 60 per carton

3-3/8” Float Clip (.71 Hor.)
For 3” Panel
Material No.: 1020236
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Packaged 80 per carton

3-3/8” Float Clip (.71 Hor.)
For 2” Panel
Material No.: 1020239
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Packaged 70 per carton

4-3/8” Float Clip (.71 Hor.)
For 3” Panel
Material No.: 1020238
G90 Galvanized: 22 ga. Tab
Base: 16 ga.
Packaged 60 per carton

Continued on following page
Application – Architectural/Mechanical

**Butterfly Tab 1-1/2”**
*Material No.: 1238708*
G90 Galvanized: 24 ga.
Packaged 200 per carton

**Butterfly Base 1-1/2”**
*Material No.: 1126602*
G90 Galvanized: 22 ga.
Packaged 200 per carton

**Butterfly Tab 2”**
*Material No.: 1216534*
G90 Galvanized: 22 ga.
Packaged 150 per carton

**Butterfly Base 2”**
*Material No.: 1126600*
G90 Galvanized: 18 ga.
Packaged 150 per carton

**Bermuda (Wall) Clip**
*Material No.: 1239568*
304SS: 24ga.
Packaged 500 per carton
Snap Lock and Universal Bearing Plates

Application – Bearing Plates

Snap Lock Bearing Plate
Material No.: 1273465
Dimension: 4.75’ x 6’
G90 Galvanized: 24 ga.
Packaged 125 per carton

Universal Bearing Plate
Dimension: 4’ x 6’ or 4’ x 5’
G90 Galvanized: 18, 20, 22 and 24 ga. Packaged 125 per carton

- Unique design fits most standing seam clips
- Hole spacings can be customized to meet customer requirements
- Produced in 16-26 ga. materials
- Available in various dimensions

<table>
<thead>
<tr>
<th>Material No.</th>
<th>Dimension</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1426129</td>
<td>4’x6”</td>
<td>16 ga. G-90 Galv.</td>
</tr>
<tr>
<td>1273467</td>
<td>4’x6”</td>
<td>18 ga. G-90 Galv.</td>
</tr>
<tr>
<td>1273469</td>
<td>4’x6”</td>
<td>20 ga. G-90 Galv.</td>
</tr>
<tr>
<td>1273470</td>
<td>4’x6”</td>
<td>22 ga. G-90 Galv.</td>
</tr>
<tr>
<td>1273482</td>
<td>4’x6”</td>
<td>24 ga. G-90 Galv.</td>
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<td>1273483</td>
<td>4’x5”</td>
<td>18 ga. G-90 Galv.</td>
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<td>1273484</td>
<td>4’x5”</td>
<td>20 ga. G-90 Galv.</td>
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<td>1273487</td>
<td>4’x5”</td>
<td>22 ga. G-90 Galv.</td>
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<tr>
<td>1273488</td>
<td>4’x5”</td>
<td>24 ga. G-90 Galv.</td>
</tr>
</tbody>
</table>
Design with unique head styles, drill point configurations and material types to meet performance requirements to attach standing seam roof clips.

**Application**

**#10 Type A: Pancake**
- **Head #2 Square Drive**
- Carbon Steel, Zinc Plated
- Metal to wood

**#10 Type A: Pancake**
- **Head #2 Square Drive**
- 300 Series Stainless Steel
- Metal to wood

**#10 Self-Drill: Pancake**
- **Head #2 Square Drive**
- Carbon Steel, Zinc Plated
- Metal to metal
- Min projection: 3/8” of threads below substrate

**#12–8 XG Low Profile Head**
- **#2 Square Drive**
- Carbon Steel, Zinc Plated
- Metal to wood

**#12–8 XG Pancake Head**
- **#2 Square Drive**
- Carbon Steel, Zinc Plated
- Metal to wood

Engineered profile features preventing panel damage from fastener head contact.

Engineered installation torque drive control for uniform installation performance.

---

**Continued on following page**
Application

#12 Type A: Pancake Head
#2 Square Drive
Carbon Steel, Zinc Plated
Metal to wood

| Head Height: 0.080 – 0.068 |
| Head Dia: 0.447 – 0.423 |
| Thread Major Dia: 0.221 – 0.215 |
| Thread Minor Dia: 0.162 – 0.155 |

**Strength (lbs ult.):**
- Tensile: 1940
- Torsional: 90 in-lbs
- Shear: 1805

**Pull-out (lbs ult.):**
- SPF wood: 1" penetration: 622

---

#12 Self-Drill: Pancake Head SD2
#2 Square Drive
Carbon Steel, Zinc Plated
Metal to metal

Drilling capacity: 0.035 – 0.210
Min projection: 3/8" of threads below substrate.

| Head Height: 0.090 – 0.078 |
| Head Dia: 0.447 – 0.423 |
| Thread Major Dia: 0.215 – 0.209 |
| Thread Minor Dia: 0.164 – 0.157 |

**Strength (lbs ult.):**
- Tensile: 2900
- Torsional: 92 in-lbs
- Shear: 2050

**Pull-out (lbs ult.):**
- 12 ga (.105): 1539
- 14 ga (.075): 1010
- 16 ga (.060): 724

---

1/4 -14 SD2 HWH

Drilling capacity (#2 point): 0.050 – 0.150
Attachment thickness:
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Min projection: 3/8" of threads below substrate.

| 5/16" AF Hex Washer Head |
| 3/8" AF Hex Washer Head |
| Thread Major Dia: 0.246 – 0.240 |
| Thread Minor Dia: 0.192 – 0.185 |

**Strength (lbs ult.):**
- Tensile: 3800
- Torsional: 150 in-lbs
- Shear: 2850

**#2 Point, Pull-out (lbs ult.):**
- 12 ga (.105): 2068
- 14 ga (.075): 1312
- 16 ga (.060): 903

---

12-24 SD5: Pancake Head
#2 Square Drive
Carbon Steel, Zinc Plated
Metal to metal

Drilling capacity: 0.075 – 0.500
Attachment thickness:
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Min projection: 3/8" of threads below substrate.

| 5/16" AF Hex Washer Head |
| 3/8" AF Hex Washer Head |
| Thread Major Dia: 0.216 – 0.210 |
| Thread Minor Dia: 0.166 – 0.161 |

**Strength (lbs ult.):**
- Tensile: 3450
- Torsional: 100 in-lbs
- Shear: 2420

**Pull-out (lbs ult.):**
- 12 ga (.105): 1378
- 2/16" (.187): Exceeds tensile value
- 1/4" (.250): Exceeds tensile value

---

**Notes**

Dimensions are nominal inches unless noted. Pull-out values (pounds ultimate) are based on 50,000 psi hot rolled steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Fasteners installed in less than 1" of solid wood may have an increased potential for a connection failure over time. This may be due to the fasteners being stripped out during installation and/or due to the lack of adequate wood fiber material to hold the fastener in place when forces are exerted upon the connection.

Continued on following page
Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Available Lengths (L)</th>
<th>CSTA-</th>
<th>S3-</th>
<th>#10x</th>
<th>1&quot;</th>
<th>PC-</th>
<th>PH2</th>
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</thead>
<tbody>
<tr>
<td>#10 Type A Pancake, Carbon Steel</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;</td>
<td>CSTA-</td>
<td>–</td>
<td>#10x</td>
<td>L-</td>
<td>PC-</td>
<td>SQ2</td>
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<tr>
<td>#10 Type A Pancake, 304 Stainless Steel</td>
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<td>S3-</td>
<td>#10x</td>
<td>L-</td>
<td>PC-</td>
<td>SQ2</td>
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<tr>
<td>#10-16 SD2 Pancake</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;</td>
<td>CSSD2-</td>
<td>–</td>
<td>#10x</td>
<td>L-</td>
<td>PC-</td>
<td>SQ2</td>
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<tr>
<td>#12-8 XG Low Profile</td>
<td>1&quot;, 1-1/2&quot;, 2&quot;</td>
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<td>–</td>
<td>#12x</td>
<td>L-</td>
<td>WF-</td>
<td>SQ2</td>
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<tr>
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<td>CSSXG-</td>
<td>–</td>
<td>#12x</td>
<td>L-</td>
<td>PC-</td>
<td>SQ2</td>
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<tr>
<td>#12 Type A Pancake</td>
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<td>CSTA-</td>
<td>–</td>
<td>#12x</td>
<td>L-</td>
<td>PC-</td>
<td>SQ2</td>
</tr>
<tr>
<td>#12 SD2 Pancake</td>
<td>1&quot;</td>
<td>CSSD2-</td>
<td>–</td>
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<td>L-</td>
<td>PC-</td>
<td>SQ2</td>
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<tr>
<td>#12-24 SD6 Pancake</td>
<td>1-1/2&quot;</td>
<td>CSSD6-</td>
<td>–</td>
<td>#12x</td>
<td>L-</td>
<td>PC-</td>
<td>SQ2</td>
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<tr>
<td>1/4-14 SD2, 5/16 AF HWH</td>
<td>1-1/4&quot;, 1-1/2&quot;</td>
<td>SD2-</td>
<td>–</td>
<td>#14x</td>
<td>L-</td>
<td>HW5/16</td>
<td>–</td>
</tr>
<tr>
<td>1/4-14 SD2, 3/8 AF HWH</td>
<td>1&quot;</td>
<td>SD2-</td>
<td>–</td>
<td>#14x</td>
<td>L-</td>
<td>HW3/8</td>
<td>–</td>
</tr>
</tbody>
</table>

Installation

Tools:  Wood application:  0-2500 rpm screw gun equipped with depth sensing nose piece.
       Metal application:  0-2000 rpm screw gun equipped with depth sensing nose piece.

*Use of impact guns or hammer drills is not recommended.*
Application

**VistaFoam™ Closure**
Material Thickness: 1", 1-1/2", 2"
Color: Charcoal

- The industry standard for closure material — time tested—millions of feet installed over the last 30-plus years.
- Polyethylene foam for exceptional strength and compressibility.
- Available with adhesive applied to assure positive positioning during installation.
- Interlocking dovetail connections available on many profiles.
- Resists damaging ultra violet rays and ozone deterioration.
- Hundreds of panel configurations available.
- One person Installation.

Technical Properties

<table>
<thead>
<tr>
<th>Test</th>
<th>Test Method</th>
<th>Units</th>
<th>Values 1&quot;</th>
<th>Values 1-1/2&quot; &amp; 2&quot;</th>
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</thead>
<tbody>
<tr>
<td>Density</td>
<td>BS ISO 7214 1998</td>
<td>lb/ft³</td>
<td>1.5</td>
<td>1.8</td>
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<tr>
<td>Working Temperature Range</td>
<td>Internal</td>
<td>°F</td>
<td>212 max</td>
<td>212 max</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-94 min</td>
<td>-94 min</td>
</tr>
<tr>
<td>Compression Deflection 25%</td>
<td>BS ISO 7214 1998</td>
<td>psi</td>
<td>7.7</td>
<td>9.3</td>
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<td></td>
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<td></td>
<td>17.1</td>
<td>19.0</td>
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<tr>
<td>Compression Set 25% - 1/2 hr</td>
<td>BS ISO 7214 1998</td>
<td>% set</td>
<td>13.0</td>
<td>10.5</td>
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<td></td>
<td></td>
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<td>5</td>
<td>3</td>
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<td>Compression Set 25% - 24 hr</td>
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<td></td>
<td>5</td>
<td>3</td>
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<tr>
<td>Tear Strength</td>
<td>BS EN ISO 8067 1995</td>
<td>lb/in</td>
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<td>4.2</td>
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<tr>
<td>Tensile Strength</td>
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<td>psi</td>
<td>46.4</td>
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<tr>
<td>Elongation</td>
<td>%</td>
<td></td>
<td>130</td>
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<tr>
<td>Flammability</td>
<td>FMVSS302</td>
<td>47/min</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>Shore Hardness</td>
<td>ISO 868 1985</td>
<td>OO</td>
<td>50</td>
<td>53</td>
</tr>
</tbody>
</table>

VistaFoam closure is not recommended for installation or placement beneath translucent or clear materials where it may be exposed to direct sunlight. The potential intensification of the sun's rays may result in increased temperatures which could effect the condition of the material.

Not all closure profiles available in all material thicknesses.

Step 1:
Ensure the self-adhesive closure configuration fits the roof panel used.

Step 2:
The inside closure fits the underside of the panel. Position the honeycomb texture side outward for optimal UV protection.

Step 3:
Place the roof panel over pre-cut closure configuration for a snug fit. Attach panel over closure with the proper fasteners.
ProfileVent®

- Limited lifetime warranty
- Glue spots prevent slipping during installation
- Fits under any ridge cap
- Fits any pitch 3:12 – 20:12
- One person roll-out installation
- Won’t scratch panel finish
- Won’t crack, dent or rust during shipping or installation
- Won’t clog from airborne dust
- No release paper – no waste
- Net free area is 17 sq. in. per lineal ft.
- Prevents insect infiltration
- Prevents snow infiltration
- Provides proven roof ventilation
- Meets all model building codes
- Packing in English, French and Spanish
- No waste — use leftovers on next job
- Will not support a flame
- Will not degrade due to UV exposure
- Made in U.S.A.

Application

ProfileVent Rolls
New or re-roof on Purlin or wood deck Construction:
Use a 2’ opening at the ridge to provide ventilation. On new or re-roof wood deck construction, cut a 2’ slot at the ridge (1” each side, start cut 6” from gable ends). On purlin construction position panels to leave a 2’ opening.

Available in following packages:
- 20’ package – 2 x 10’ rolls
- 50’ package – 2 x 25’ rolls
- 100’ package – 2 x 50’ rolls

1. Allow 2’ opening at ridge for ventilation. ProfileVent is rolled out along the ridge, gable to gable, about 1/2” to 1” up-slope from the ridge cap edge. The positioning adhesive on most profiles will hold ProfileVent in position and allow for repositioning.

2. ProfileVent can be cut with scissors or utility knife. Inset: When splicing ProfileVent, make the splice at the center top of the high rib and use caulk or sealant along the splice.

3. Screw through ridge cap and top of each anchor clip. Blind Rivets can be used to anchor the ridge cap when using architectural or standing seam panels.

Current panel profiles

3/4” Hi Rib
R-Panel
ProfileVent matches most major OEM profiles. Call for details.

Continued on following page
ProfileVent®

Metal roofing ridge vent – 3-ft. sticks

Fast, easy installation with new improved adhesive

Just "stick it" on the panel - no release paper, no waste to dispose of

Superior to foam products - will not collect moisture or dust

Made from 90% recycled fiber

Net free area is 17 sq. in. per lineal ft.

Will not degrade due to UV Exposure

Limited lifetime warranty

Application

ProfileVent 3' Stick
New or re-roof on Purlin or wood deck Construction:

Use a 2” opening at the ridge to provide ventilation. On new or re-roof wood deck construction, cut a 2” slot at the ridge (1” each side, start cut 6” from gable ends). On purlin construction position panels to leave a 2” opening.

1 Allow 2” opening at ridge for ventilation. ProfileVent is positioned along the ridge, gable to gable, about 1/2” to 1” up-slope from the ridge cap edge. The positioning adhesive on most profiles will hold ProfileVent in position and allow for repositioning.

2 ProfileVent can be cut with scissors or utility knife. Inset: When splicing ProfileVent, make the splice at the center top of the high rib and use caulk or sealant along the splice.

3 Screw through ridge cap and top of each anchor clip. Blind Rivets can be used to anchor the ridge cap when using architectural or standing seam panels.

Current panel profiles

<table>
<thead>
<tr>
<th>Description</th>
<th>Positioning</th>
<th>Dimensions</th>
<th>Packaging</th>
<th>Material No.</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; Hi-Rib</td>
<td>9” on center ribs</td>
<td>1” deep x 3” wide x 3’ long</td>
<td>72’/ctn</td>
<td>1300476</td>
<td>PV-.75”x9”x3”x1.625’/.313’</td>
</tr>
<tr>
<td>R-Panel</td>
<td>12” on center ribs</td>
<td>1-1/2” deep x 3” wide x 3’ long</td>
<td>48’/ctn</td>
<td>1357916</td>
<td>PV-1.25”x12”x3”x3.063’/1’</td>
</tr>
</tbody>
</table>
Anchor clips are recommended in high wind areas and on panels with major ribs 16” on center or greater.

**Application**

**Ventco™ Ridge Cap Anchor Clip**

An independent engineering corporation tested the performance of the Ventco Ridge Cap Anchor Clip under high wind loading. During testing, a roof/ridge vent/cap system was subjected to wind speeds that follow the Dade County Test protocol.

The following observations were made concerning the performance and structural integrity of the clip and ridge cap:

- No lifting of the ridge cap up to 115 mph
- No fastener pull out or loosening
- The ridge cap remained in contact with ventilation system
- No difference in performance when the cap is secured to the clip with screws or rivets

**Specifications**

- 20 gauge galvanized steel
- Visible surface painted black for aesthetic purposes

**Packaging**

- 25 clips per small box
- 24 small boxes per master box
- 600 clips per master box

**Options**

None

Anchor Clip U.S. Pat. 6418678 (other patents pending)
Pipe Flashing

Pipe opening can be easily customized on job sight utilizing clearly marked pipe diameters on each flashing.

- EPDM and Silicone are both flexible materials, resistant to ultraviolet rays, cracking or weathering.
- Available in EPDM black or gray and silicone red.

### Application

#### Square Base

<table>
<thead>
<tr>
<th>Size</th>
<th>Pipe Size</th>
<th>Base Size</th>
<th>Code Black EPDM</th>
<th>Code Red Silicone</th>
<th>Top</th>
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<tbody>
<tr>
<td>1</td>
<td>1/4 – 2 -3/4&quot;</td>
<td>4-1/2&quot;</td>
<td>PFS-EPDM-#1-1/4to2-3/4</td>
<td>PFS-SC-#1-1/4to2-3/4</td>
<td>Closed</td>
</tr>
<tr>
<td>2</td>
<td>1/4 – 5-3/4&quot;</td>
<td>6&quot;</td>
<td>PFR-EPDM-#2-1-3/4to5-3/4</td>
<td>PFR-SC-#2-1-3/4to5-3/4</td>
<td>Closed</td>
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<tr>
<td>3</td>
<td>1-3/4 – 3&quot;</td>
<td>8&quot;</td>
<td>PFR-EPDM-#3-1-1/4to3</td>
<td>PFR-SC-#3-1-1/4to3</td>
<td>Closed</td>
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<tr>
<td>4</td>
<td>1/4 – 5&quot;</td>
<td>10&quot;</td>
<td>PFR-EPDM-#4-3-7/8to5</td>
<td>PFR-SC-#4-3-7/8to5</td>
<td>Closed</td>
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<tr>
<td>5</td>
<td>4-1/4 – 6&quot;</td>
<td>12&quot;</td>
<td>PFR-EPDM-#5-9to6-1/4</td>
<td>PFR-SC-#5-9to6-1/4</td>
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<td>14-1/4&quot;</td>
<td>PFR-EPDM-#6-1/4to6-1/4</td>
<td>PFR-SC-#6-1/4to6-1/4</td>
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<td>16&quot;</td>
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<td>20-1/2&quot;</td>
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<td>PFR-SC-#10-1-1/4to10</td>
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#### Round Base

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<th>Size</th>
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<th>Base Size</th>
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<th>Code Red Silicone</th>
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<tbody>
<tr>
<td>1</td>
<td>1/4 – 1-1/2&quot;</td>
<td>4-1/4&quot;</td>
<td>PFR-EPDM-#1-1/4to1-1/2</td>
<td>PFR-SC-#1-1/4to1-1/2</td>
<td>Closed</td>
</tr>
<tr>
<td>2</td>
<td>1-3/4 – 2&quot;</td>
<td>6-1/4&quot;</td>
<td>PFR-EPDM-#2-1-3/4to2</td>
<td>PFR-SC-#2-1-3/4to2</td>
<td>Closed</td>
</tr>
<tr>
<td>3</td>
<td>1/4 – 3&quot;</td>
<td>7-3/4&quot;</td>
<td>PFR-EPDM-#3-1/4to3</td>
<td>PFR-SC-#3-1/4to3</td>
<td>Closed</td>
</tr>
<tr>
<td>4</td>
<td>3 – 4&quot;</td>
<td>9-1/4&quot;</td>
<td>PFR-EPDM-#4-3to4</td>
<td>PFR-SC-#4-3to4</td>
<td>Closed</td>
</tr>
<tr>
<td>5</td>
<td>4-1/4 – 5&quot;</td>
<td>10-3/4&quot;</td>
<td>PFR-EPDM-#5-4-1/4to5</td>
<td>PFR-SC-#5-4-1/4to5</td>
<td>Closed</td>
</tr>
<tr>
<td>6</td>
<td>5 – 6&quot;</td>
<td>12&quot;</td>
<td>PFR-EPDM-#6-1/4to6-1/4</td>
<td>PFR-SC-#6-1/4to6-1/4</td>
<td>Closed</td>
</tr>
<tr>
<td>7</td>
<td>6 – 7&quot;</td>
<td>14&quot;</td>
<td>PFR-EPDM-#7-1/2to7</td>
<td>PFR-SC-#7-1/2to7</td>
<td>Closed</td>
</tr>
<tr>
<td>8</td>
<td>7 – 8&quot;</td>
<td>16-1/2&quot;</td>
<td>PFR-EPDM-#8-7to8</td>
<td>PFR-SC-#8-7to8</td>
<td>Closed</td>
</tr>
<tr>
<td>9</td>
<td>9 – 9&quot;</td>
<td>20-1/2&quot;</td>
<td>PFR-EPDM-#9-9to9</td>
<td>PFR-SC-#9-9to9</td>
<td>Closed</td>
</tr>
</tbody>
</table>

#### Retrofit Square Base

<table>
<thead>
<tr>
<th>Size</th>
<th>Pipe Size</th>
<th>Base Size</th>
<th>Code Black EPDM</th>
<th>Code Red Silicone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/2 – 2&quot;</td>
<td>8-3/4&quot;</td>
<td>PFRS-EPDM-#1-1/4to2</td>
<td>PFRS-SC-#1-1/4to2</td>
</tr>
<tr>
<td>2</td>
<td>4 – 6&quot;</td>
<td>10-1/2&quot;</td>
<td>PFRS-EPDM-#2-4to6</td>
<td>PFRS-SC-#2-4to6</td>
</tr>
<tr>
<td>3</td>
<td>9-1/4 – 12&quot;</td>
<td>16-1/4&quot;</td>
<td>PFRS-EPDM-#3-9-1/4to12</td>
<td>PFRS-SC-#3-9-1/4to12</td>
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</tbody>
</table>
Pipe Flashing

Application

Retrofit Round Base Zipper

<table>
<thead>
<tr>
<th>Size</th>
<th>Pipe Size</th>
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<th>Code Black or Gray EPDM</th>
<th>Code Red Silicone</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>2 – 7-1/4&quot;</td>
<td>10-3/4&quot;</td>
<td>PFRRZ-EPDM-#2-2to7-1/4</td>
<td>PFRRZ-SC-#2-2to7-1/4</td>
</tr>
<tr>
<td>3</td>
<td>3-1/4 – 10&quot;</td>
<td>25-1/4&quot;</td>
<td>PFRRZ-EPDM-#3-3-1/4to10</td>
<td>PFRRZ-SC-#3-3-1/4to10</td>
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</tbody>
</table>

Multi-Flash Square Base

<table>
<thead>
<tr>
<th>Size</th>
<th>Pipe Size</th>
<th>Base Size</th>
<th>Code Black EPDM</th>
<th>Code Red Silicone</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1/4 – 5 -3/4&quot;</td>
<td>2 – 4-1/2&quot;</td>
<td>PFMULTI-EPDM-#3</td>
<td>PFMULTI-SC-#3</td>
</tr>
<tr>
<td>5</td>
<td>4 – 8-1/4&quot;</td>
<td>3-1/2 – 6-3/4&quot;</td>
<td>PFMULTI-EPDM-#5</td>
<td>PFMULTI-SC-#5</td>
</tr>
<tr>
<td>8</td>
<td>6-3/4 – 13-1/2&quot;</td>
<td>6-1/2 – 12&quot;</td>
<td>PFMULTI-EPDM-#8</td>
<td>PFMULTI-SC-#8</td>
</tr>
<tr>
<td>10/MAX</td>
<td>12 – 28-1/2&quot;</td>
<td>13 – 27&quot;</td>
<td>PFMULTI-EPDM-#10</td>
<td>PFMULTI-SC-#10</td>
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</tbody>
</table>

Material Specification

<table>
<thead>
<tr>
<th>Test Type</th>
<th>EPDM</th>
<th>Silicone (Hi-Temp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance ozone resistance text @ 500 pphm</td>
<td>70 Hrs.</td>
<td>70 Hrs.</td>
</tr>
<tr>
<td>High temperature</td>
<td>Intermittent</td>
<td>+275º F</td>
</tr>
<tr>
<td></td>
<td>Continuous</td>
<td>+212º F</td>
</tr>
<tr>
<td>Low temperature</td>
<td>Resistance tested to</td>
<td>-65º F</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>1450 psi</td>
<td>700 psi</td>
</tr>
</tbody>
</table>

Options

Colors available in standard square and round base pipe flashing

- Black
- White
- Gray
- Terra Cotta
- Brown
- Light Green
- Light Blue
- Dark Blue
- Bright Red
Butyl Tape

- Designed for side and end lap sealing of metal panels, roof vents and pipe flashing
- Exceeds sealing requirements for AC, refrigeration and windows
- Extruded on silicone coated paper for easy application
- Greater cohesive strength
- Superior adhesion

Tested Physical Properties

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Test</th>
<th>Typical Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSTM 10*</td>
<td>Color</td>
<td>Light Grey</td>
</tr>
<tr>
<td>ASTM D-217-68</td>
<td>Cone penetration @ 77°F/25°C, 105g/5sec. 1/10mm</td>
<td>55</td>
</tr>
<tr>
<td>ASTM C-771-74</td>
<td>Non-volatiles, % weight @ 212±3°F/100±2°C</td>
<td>99+</td>
</tr>
<tr>
<td>ASTM D 792-66</td>
<td>Weight/gallon @ 77°F</td>
<td>12.9 lbs</td>
</tr>
<tr>
<td></td>
<td>Weight/liter @ 25°C</td>
<td>1.50 kg</td>
</tr>
<tr>
<td>ASTM D 792-66</td>
<td>Specific gravity @ 77°F/25°C</td>
<td>1.55</td>
</tr>
<tr>
<td>GSTM 11*</td>
<td>Service temperature – range</td>
<td>-60° to +275°F, -51° to +135°C</td>
</tr>
<tr>
<td>GSTM 16*</td>
<td>Sag (3 weeks @ 160°F/71°C)</td>
<td>None</td>
</tr>
<tr>
<td>ASTM C-765-73</td>
<td>Cold temperature flexibility 1/2&quot; (12.7 mm) Mandel Bend @ -60°F/-51°C</td>
<td>No cracking or loss of adhesion</td>
</tr>
<tr>
<td>GSTM 9*</td>
<td>Webbing and elongation: @ 77°F/25°C</td>
<td>1,050%+</td>
</tr>
<tr>
<td></td>
<td>@ 32°F/0°C</td>
<td>3,050%+</td>
</tr>
<tr>
<td>GSTM 1*</td>
<td>Adhesive/cohesive failure mode @ 77°F/25°C</td>
<td>3%/97%</td>
</tr>
<tr>
<td>ASTM D-897-72</td>
<td>Tensile strength, p.s.i. @ 77°F/25°C</td>
<td>25</td>
</tr>
<tr>
<td>ASTM D-750-68</td>
<td>Weatherability - 1,000 hours in Q.U.V. weatherometer (Cycle of 8 hours U.V. @ 150°F/65°C; then 4 hours of condensation @ 104°F/40°C)</td>
<td>No discoloration, cracking, crazing, or loss of adhesion</td>
</tr>
</tbody>
</table>

Application Recommendation

Surfaces: All surfaces to be sealed should be free of dust, dirt, oil and moisture before applying sealant. Do not use the tape on plastic coated surfaces. Do not apply sealant to surfaces that are still sticky from a previously used release paper. Do not apply sealant to surfaces that have been painted or coated with a moisture, ice or water sensitive material. Application: Apply MB-10A tape to surface directly from roll. Press sealant through the silicone release paper with a smooth, even hand motion. Note: for metal roofing and siding applications, place sealant under the fastener to prevent wind blown rain from leaking through the fastener holes.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
<th>Code</th>
<th>Feet/Roll</th>
<th>Rolls/Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/16&quot; Bead Butyl Sealant</td>
<td>500070</td>
<td>SEALANT-3/16”x25’</td>
<td>25’</td>
<td>48</td>
</tr>
<tr>
<td>3/8” x 3/32” Butyl Sealant</td>
<td>500072</td>
<td>SEALANT-3/8”x3/32”x45’</td>
<td>45’</td>
<td>48</td>
</tr>
<tr>
<td>1/2” x 3/32” Butyl Sealant</td>
<td>500073</td>
<td>SEALANT-1/2”x3/32”x50’</td>
<td>50’</td>
<td>20</td>
</tr>
<tr>
<td>3/4” x 3/32” Butyl Sealant</td>
<td>300074</td>
<td>SEALANT-3/4”x3/32”x50’</td>
<td>50’</td>
<td>14</td>
</tr>
<tr>
<td>1” x 1/8” Butyl Sealant</td>
<td>500075</td>
<td>SEALANT-1”x1/8”x40’</td>
<td>40’</td>
<td>12</td>
</tr>
<tr>
<td>7/8” x 3/16” Double Bead Butyl Sealant</td>
<td>1304579</td>
<td>SEALANT-7/8”x3/16”x25’-DOUBLE</td>
<td>25’</td>
<td>8</td>
</tr>
<tr>
<td>2-1/2” x 3/16” Triple Bead Butyl Sealant</td>
<td>1304575</td>
<td>SEALANT-2-1/2”x3/16”x20’</td>
<td>20’</td>
<td>6</td>
</tr>
</tbody>
</table>

Rolls are packed in water-resistant cartons.
Hannoband® BG1 is a pre-compressed, self-expanding polyurethane foam with acrylate dispersion impregnation.

- Provides resistance to rain, wind, sun/UV, sound, draft and dust.
- Test after 15 years field-installation certifies full performance including sun/UV-resistance.
- Use for sealing joints and seams in metal panels, gaps around door and window frames, and expansion joints in buildings.
- Pressure sensitive adhesive for fast and easy installation.
- Flame retardant.

**Technical Data**

<table>
<thead>
<tr>
<th>Property</th>
<th>BG1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Resistance to water penetration*</td>
<td>ASTM E 331/E 547/DIN 18542 BG1</td>
</tr>
<tr>
<td>Heat resistance</td>
<td>Long Term: -40°F - 194°F (-30°C - 90°C)</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>ASTM D3574/ISO 1798</td>
</tr>
<tr>
<td>Compression force</td>
<td>ASTM D3574/ISO 3386</td>
</tr>
<tr>
<td>Density</td>
<td>ISO 845</td>
</tr>
<tr>
<td>Thermal Conductance</td>
<td>DIN EN 12667</td>
</tr>
<tr>
<td>Shelf Life</td>
<td>18 months from date of production</td>
</tr>
<tr>
<td>Hurricane Test Loads (ATI in York, PA)*</td>
<td>ASTM E 330</td>
</tr>
<tr>
<td>Air Tightness (ATI in York, PA)*</td>
<td>ASTM E 283</td>
</tr>
<tr>
<td>Driving Rain Tightness (ATI in York, PA)*</td>
<td>ASTM E 331</td>
</tr>
<tr>
<td>Compatibility with adjoining Building Materials*</td>
<td>DIN 18542</td>
</tr>
</tbody>
</table>

*Data based on product thickness at 100% performance (80% compression)

**Selection**

<table>
<thead>
<tr>
<th>Material No.</th>
<th>Size Thickness x Width</th>
<th>Compressed Thickness on Roll</th>
<th>Expanded Thickness @ 100% Performance</th>
<th>Fully Expanded Thickness</th>
<th>Length</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>1305091</td>
<td>1/4&quot; x 1&quot;</td>
<td>1/8&quot;</td>
<td>1/4&quot;</td>
<td>1&quot;</td>
<td>20.0 ft.</td>
<td>12 rolls/ctn</td>
</tr>
<tr>
<td>1305092</td>
<td>3/8&quot; x 1&quot;</td>
<td>3/16&quot;</td>
<td>3/8&quot;</td>
<td>1-1/2&quot;</td>
<td>15.0 ft.</td>
<td>12 rolls/ctn</td>
</tr>
</tbody>
</table>

**Product Performance Levels Based on Compression % of Expanded Thickness**

- No seal
- Dust and sound protection, thermal insulation
- Dust and sound protection, thermal insulation, wind/air protection
- Dust and sound protection, thermal insulation, wind/air protection, rain protection up to 6.25psf
- Dust and sound protection, thermal insulation, wind/air protection, rain protection up to 21.57psf, air tight
- Supplied condition

**Disposal**

Residual tape can be disposed of in the household waste. The local regulations are to be adhered to.

**Safety**

On the basis of existing data and experience, the product is not hazardous in the meaning of the Hazardous Material Regulations. We recommend however that you take the same care and use the same hygiene as with chemical materials.
**SX Stainless Self-Drill**

- SX Austenitic stainless fasteners come with a Bi-metal welded carbon steel point.
- SX Austenitic stainless product line offers fastening solutions for attaching panels from very thin to 1/2" structural steel.
- Provides ultimate corrosion performance for attaching steel, stainless or aluminum panels.
- Designed for secured attachment to both panel and substructures.

### Application

**SX3 Self-Drill**

Assembled stainless bondSeal

Metal to metal

Drill capacity: .035 – .098

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

5/16" AF Hex Washer Head

Dia: Nominal #14

Strength (lbs ult.):
- Tensile: 2535
- Torsional: 70 in-lbs
- Shear: 1864

Pull-out (lbs ult.):
- 12 ga (.105): 2016
- 14 ga (.075): 1473
- 16 ga (.060): 1020

Pull-over (lbs ult.):
- 24 ga (.024): 1235
- 26 ga (.018): 936

**SX5 Self-Drill**

Assembled stainless bondSeal

Metal to metal

Drill capacity: .060 – .157

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

5/16" AF Hex Washer Head

Dia: Nominal #12

Strength (lbs ult.):
- Tensile: 2743
- Torsional: 70 in-lbs
- Shear: 2149

Pull-out (lbs ult.):
- 12 ga (.105): 1292
- 14 ga (.075): 908
- 16 ga (.060): 703

Pull-over (lbs ult.):
- 24 ga (.024): 1420
- 26 ga (.018): 1141

**SX14 Self-Drill**

Assembled stainless bondSeal

Metal to metal

Drill capacity: .157 – .550

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

5/16" AF Hex Washer Head

Dia: Nominal #12

Strength (lbs ult.):
- Tensile: 2784
- Torsional: 70 in-lbs
- Shear: 2110

Pull-out (lbs ult.):
- 12 ga (.105): 1220
- 3/16" (.187): 2191
- 1/4" (.250): Exceeds tensile value

Pull-over (lbs ult.):
- 24 ga (.024): 1420
- 26 ga (.018): 1141

**SL2-S Free Spin Lap**

Assembled stainless bondSeal

Panel to panel side lap

Drill capacity: .031 – .060

Some applications may require attaching light gage (24-26 ga) to sub-structural member. Composite thickness should not exceed .060".

5/16" AF Hex Washer Head

Dia: Nominal #14

Strength (lbs ult.):
- Tensile: 3740
- Torsional: 70 in-lbs
- Shear: 2790

5/16" AF Hex Washer Head

Dia: Nominal #12

Strength (lbs ult.):
- Tensile: 1670
- Torsional: 50 in-lbs
- Shear: 1370

Notes

Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Continued on following page
**SX Stainless Self-Drill**

**SX austenitic stainless steel**
For metal to metal

---

### Application

**SX5 Standoff**
Assembled stainless bondSeal
Insulated panel to metal
Drill capacity: .060 – .157

**SX14 Self-Drill Standoff**
Assembled stainless bondSeal
Insulated panel to metal
#5 Point
Drill capacity: .157 – .551

**SX5W Self-Drill Standoff**
Assembled stainless bondSeal
Insulated panel to wood
Drill capacity: .031 – .079

---

### Notes
Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

### Selection

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Material No.</th>
<th>Type</th>
<th>Clamping Length (mm)</th>
<th>Washer</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SX3 bondSeal</td>
<td></td>
<td>1141978</td>
<td>SX3/</td>
<td>9-</td>
<td>S16-</td>
<td>6X</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>1133237</td>
<td>SX3/</td>
<td>15-</td>
<td>S16-</td>
<td>6X</td>
<td>40</td>
<td></td>
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<tr>
<td></td>
<td>1133239</td>
<td>SX3/</td>
<td>20-</td>
<td>S16-</td>
<td>6X</td>
<td>50</td>
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<tr>
<td>SX3 No Washer</td>
<td></td>
<td>1141971</td>
<td>SX3/</td>
<td>9-</td>
<td>–</td>
<td>6X</td>
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<tr>
<td></td>
<td>1142006</td>
<td>SX3/</td>
<td>15-</td>
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<td></td>
<td>1142057</td>
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<td>20-</td>
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<td>SX5/</td>
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<tr>
<td></td>
<td>1123168</td>
<td>SX5/</td>
<td>12-</td>
<td>S16-</td>
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<td></td>
<td>1134477</td>
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<td>18-</td>
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<td>SX5/</td>
<td>38-</td>
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<td>1133330</td>
<td>SX5/</td>
<td>55-</td>
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<td>SX5/</td>
<td>70-</td>
<td>S16-</td>
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Continued on following page
## SX Stainless Self-Drill

### Selection

<table>
<thead>
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<th>Material No.</th>
<th>Type</th>
<th>Clamping Length (mm)</th>
<th>Washer</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
<th>Panel Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>SX5 No Washer</td>
<td>1133040</td>
<td>SX5/</td>
<td>8-</td>
<td>–</td>
<td>5,5X</td>
<td>31</td>
<td>–</td>
</tr>
<tr>
<td>12-14 x 1-1/2 SD</td>
<td>1133976</td>
<td>SX5/</td>
<td>12-</td>
<td>–</td>
<td>5,5X</td>
<td>35</td>
<td>–</td>
</tr>
<tr>
<td>12-14 x 1-5/8 SD</td>
<td>1134478</td>
<td>SX5/</td>
<td>18-</td>
<td>–</td>
<td>5,5X</td>
<td>41</td>
<td>–</td>
</tr>
<tr>
<td>12-14 x 2-1/2 SD</td>
<td>1172097</td>
<td>SX5/</td>
<td>38-</td>
<td>–</td>
<td>5,5X</td>
<td>61</td>
<td>–</td>
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<tr>
<td>12-14 x 3-1/8 SD</td>
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<td>SX5/</td>
<td>55-</td>
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<td>5,5X</td>
<td>78</td>
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<tr>
<td>12-14 x 3-3/4 SD</td>
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<td>70-</td>
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<td>12-</td>
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<tr>
<td>12-14 x 1-7/8 SD</td>
<td>773625</td>
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<td>S16-</td>
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<tr>
<td>12-14 x 2-1/2 SD</td>
<td>770805</td>
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<td>38-</td>
<td>S16-</td>
<td>5,5X</td>
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<td>–</td>
</tr>
<tr>
<td>12-14 x 3-3/4 SD</td>
<td>523277</td>
<td>SX14/</td>
<td>58-</td>
<td>S16-</td>
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<td>SX14 No Washer</td>
<td>113786</td>
<td>SX14/</td>
<td>12-</td>
<td>–</td>
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<td>12-14 x 1-9/16 SD</td>
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<tr>
<td>12-14 x 1-7/8 SD</td>
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<td>1-1/2&quot; – 2-5/8&quot;</td>
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<td>12-14 x 4-1/2 SD</td>
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<td>115</td>
<td>2-5/16&quot; – 3-7/16&quot;</td>
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<td>5,5X</td>
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<td>3-1/8&quot; – 4-1/4&quot;</td>
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<tr>
<td>12-14 x 6-1/4 SD</td>
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<td>SX5-</td>
<td>–</td>
<td>S19-</td>
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<td>3-3/4&quot; – 5-1/8&quot;</td>
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<td>–</td>
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<td>–</td>
<td>S19-</td>
<td>6,5X</td>
<td>90</td>
<td>1-1/8&quot; – 1-7/8&quot;</td>
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<tr>
<td>1/4-14 x 3-1/2</td>
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<td>SXCW-</td>
<td>–</td>
<td>S19-</td>
<td>6,5X</td>
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<td>–</td>
<td>S19-</td>
<td>6,5X</td>
<td>115</td>
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<td>–</td>
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<td>6,5X</td>
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<td>6,5X</td>
<td>155</td>
<td>3-1/16&quot; – 4-1/8&quot;</td>
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</tbody>
</table>

### Installation

Fasteners should provide for a minimum of 3 fully developed threads through the metal substrate.
Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.
Use of impact guns or hammer drills is not recommended.

### Options

**Painted**

![Painted Option Image]
**irius® SX Stainless Self-Drill**

- **irius®** is a patented drive system available on a full range of metal building fasteners.
- **irius® SX stainless fasteners’ low profile head** that has changed the future architectural appearance of sidewall fastening.
- Fastening system drive socket ensures positive engagement and prevents damage to a painted fastener head.

**Application**

**SX 3-L12 irius® Self-Drill**

<table>
<thead>
<tr>
<th>Assembled stainless</th>
<th>bondSeal</th>
<th>Metal to metal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill capacity #12:</td>
<td>.060 – .118</td>
<td></td>
</tr>
<tr>
<td>Drill capacity #14:</td>
<td>.035 – .098</td>
<td></td>
</tr>
<tr>
<td>Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.</td>
<td></td>
<td></td>
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</table>

**SX 5-L12 irius® Self-Drill**

<table>
<thead>
<tr>
<th>Assembled stainless</th>
<th>bondSeal</th>
<th>Metal to metal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill capacity:</td>
<td>.060 – .157</td>
<td></td>
</tr>
<tr>
<td>Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.</td>
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**SX 14-L12 irius® Self-Drill**

<table>
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<th>Assembled stainless</th>
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<th>Metal to metal</th>
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<tbody>
<tr>
<td>Drill capacity:</td>
<td>.157 – .550</td>
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<tr>
<td>Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.</td>
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**SL2-S-L12 irius® Free Spin Lap**

<table>
<thead>
<tr>
<th>Assembled stainless</th>
<th>bondSeal</th>
<th>Panel to panel side lap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill capacity:</td>
<td>.031 – .060</td>
<td></td>
</tr>
<tr>
<td>Some applications may require attaching light gage (24-26 ga) to sub-structural member. Composite thickness should not exceed .060”.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**
Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

**Architectural Fasteners**

- Self-drilling point design assures superior point strength and the excellent drill performance through high strength steel.
- Stainless fasteners provide the ultimate corrosion performance for attaching steel, stainless or aluminum panels.
- SX austenitic stainless self-drill fasteners are engineered to have low driving torque and provide maximum clamp load.

---

**irius® SX austenitic stainless steel**

For metal to metal
### Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
<th>Type</th>
<th>Clamping Length (mm)</th>
<th>Head</th>
<th>Washer</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SX3-L12 irius® bondSeal</td>
<td>14-11 x 1-1/8 SD</td>
<td>SX3/</td>
<td>9-</td>
<td>L12-</td>
<td>A12-</td>
<td>6X</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>14-11 x 1-1/2 SD</td>
<td>SX3/</td>
<td>15-</td>
<td>L12-</td>
<td>A12-</td>
<td>6X</td>
<td>40</td>
</tr>
<tr>
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<td>SX3/</td>
<td>15-</td>
<td>L12-</td>
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<td>5,5X</td>
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<tr>
<td></td>
<td>14-11 x 1-1/8 SD</td>
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<td>9-</td>
<td>L12-</td>
<td>–</td>
<td>6X</td>
<td>29</td>
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<td></td>
<td>14-11 x 1-1/2 SD</td>
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<td>15-</td>
<td>L12-</td>
<td>–</td>
<td>6X</td>
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<td>A12-</td>
<td>5,5X</td>
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<td>SX5/</td>
<td>12-</td>
<td>L12-</td>
<td>A12-</td>
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<td>38-</td>
<td>L12-</td>
<td>S16-</td>
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<td>SX5/</td>
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<td>20-30-</td>
<td>L12-</td>
<td>–</td>
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<td>12-14 x 2-7/16 SD</td>
<td>SX5/</td>
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<td>SX14/</td>
<td>12-</td>
<td>L12-</td>
<td>S16-</td>
<td>5,5X</td>
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<td>SX14-L12 irius® No Washer</td>
<td>12-14 X 1-9/16 SD</td>
<td>SX14/</td>
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</tbody>
</table>

### Installation

Fasteners should provide for a minimum of 3 fully developed threads through the metal substrate.

Tools: 0 – 2000 rpm screw gun equipped with depth sensing nose piece.

The E420 irius® drive socket (part #0973316) is required.

Use of impact guns or hammer drills is not recommended.

### How to use the E420 socket for irius® fasteners

1. Pull out the Jaws of the socket
2. Insert the irius® (L12) head style fastener
3. Setting process
4. Pull back tool to open socket chaws
Roofing and Cladding

SX TORX® Self-Drill

SX Austenitic stainless fasteners come with a Bi-metal welded carbon steel point.
SX Austenitic stainless product line offers fastening solutions for attaching panels from very thin to medium gage applications.
Provides ultimate corrosion performance for attaching steel, stainless or aluminum panels.

Application

SX 3-D10 TORX® Self-Drill
No washer
Metal to metal
Drill capacity: .039 – .118"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

SX 3-D12 TORX® Self-Drill
No washer
Metal to metal
Drill capacity: .060 – .118"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

SX 5-D12 TORX® Self-Drill
Assembled aluminum bondSeal
Metal to metal
Drill capacity: .060 – .157"
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.

SL2-S-D12 TORX® Lap
Assembled aluminum bondSeal
Panel to panel side lap
Drill capacity: .031 – .060"
Some applications may require attaching light gage (24-26 ga) to sub-structural member. Composite thickness should not exceed .060".

Notes
Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Continued on following page
Selection

<table>
<thead>
<tr>
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<th>Washer</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
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<td>5,5X</td>
<td>25</td>
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</table>

Installation

Fasteners should provide for a minimum of 3 fully developed threads through the metal substrate.
Tools: 0-2000 rpm screw gun equipped with depth sensing nose piece.
Use of T20W or T25 TORX drive bit is required.
Use of impact guns or hammer drills is not recommended.

Options

Painted
TW-S Stainless Self-Tapping

- Aesthetic fastening system for attaching cladding panels to timber battens, aluminum and steel framework.
- Low profile TORX® drive head can be colored to match any cladding panel.
- 304 Stainless Steel provides maximum resistance to corrosion.

**Application**

**TW-S-D12**

**#10-12 Self-Tapping**

No washer

Cladding Panel to Wood

Material: 304 Austentic Stainless Steel

<table>
<thead>
<tr>
<th>Material No.</th>
<th>Type</th>
<th>Head</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>902988</td>
<td>TW-S-</td>
<td>D12-</td>
<td>4.8X</td>
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<tr>
<td>986742</td>
<td>TW-S-</td>
<td>D12-</td>
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<tr>
<td>625848</td>
<td>TW-S-</td>
<td>D12-</td>
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<tr>
<td>698813</td>
<td>TW-S-</td>
<td>D12-</td>
<td>4.8X</td>
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<td>55443</td>
<td>TW-S-</td>
<td>D12-</td>
<td>4.8X</td>
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</table>

**TW-S-D13**

**#12-11 Self-Tapping**

No washer

Cladding Panel to Metal

Material: 304 Austentic Stainless Steel

<table>
<thead>
<tr>
<th>Material No.</th>
<th>Type</th>
<th>Head</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
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<tbody>
<tr>
<td>705260</td>
<td>TW-S-</td>
<td>D13-</td>
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<td>759330</td>
<td>TW-S-</td>
<td>D13-</td>
<td>5.5X</td>
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<td>705261</td>
<td>TW-S-</td>
<td>D13-</td>
<td>5.5X</td>
<td>38</td>
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</table>

**Notes:** Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

**Selection**

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
<th>Material No.</th>
<th>Type</th>
<th>Head</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TW-S-D12</td>
<td>10-12 x 1</td>
<td>902988</td>
<td>TW-S-</td>
<td>D12-</td>
<td>4.8X</td>
<td>25</td>
</tr>
<tr>
<td>TW-S-D13</td>
<td>12-11 x 1</td>
<td>705260</td>
<td>TW-S-</td>
<td>D13-</td>
<td>5.5X</td>
<td>25</td>
</tr>
</tbody>
</table>

**Installation**

Fastener length should provide for a minimum of 1" penetration into wood substrate.

Tools: Panel to metal: 0-2000 rpm screw gun with depth sensing nose piece.

Panel to wood: 0-2500 rpm screw gun with depth sensing nose piece.

Use of T20W TORX drive bit is required.

**Options**

Painted
304 austenitic stainless steel provides the optimum corrosion resistance performance.

SLA3 TORX® T20W drive makes installation fast and easy.

SLA5 Hex washer head provides driving stability.

Resistant to back out.

Low profile provides for an aesthetically pleasing façade.

Custom color matching to your panel is available with scratch resistant coating.

Application

SLA3 Self-Drill
No washer
Aluminum composite panels to aluminum framework
Drilling Capacity (Aluminum): .071"-.118"
Grip Range: 0.236"

SLA5 Self-Drill
No washer
Aluminum to aluminum framework
Drilling Capacity (Aluminum): .196"
Grip Range: .750"-.160"-.240"-.315"

Material: 304 Austentic Stainless Steel A2, Material Number 1.4301, AISI 304

Material: 316 Austentic Stainless Steel A4, Material Number 1.4401, AISI 316

Notes
Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
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<th>Clamping Length (mm)</th>
<th>Material</th>
<th>Head</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
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<tbody>
<tr>
<td>10-16 x 3/4&quot; SD2</td>
<td>1025056</td>
<td>SLA3/ 6-</td>
<td>S-</td>
<td>D12-</td>
<td>4.8X</td>
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<tr>
<td>1/4-13 x 3/4&quot; SD2</td>
<td>1102034</td>
<td>SLA5/ 4-6-</td>
<td>S4-</td>
<td>–</td>
<td>6X</td>
<td>19</td>
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<tr>
<td>1/4-13 x 7/8&quot; SD2</td>
<td>957352</td>
<td>SLA5/ 6-8-</td>
<td>S4-</td>
<td>–</td>
<td>6X</td>
<td>21</td>
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</tbody>
</table>

Installation
0-2000 rpm screw gun equipped with depth sensing nose piece.
Use of T20W TORX drive bit is required.
Use of impact guns or hammer drills is not recommended.

Options
Painted
SA6/TDA

Architectural cladding fasteners

- 304 austenitic stainless steel
- Ensures compatibility between fastener, panel and framework

Application

**SA6 PHL Pan Head**

- **#10-16 Self-Drill**
- No washer
- Panel to Aluminum
- Aluminum to Aluminum
- Drilling capacity: Max .118"

Material: 304 Austenitic Stainless Steel

**SA6 PHL Flat Head**

- **#10-16 Self-Drill**
- No washer
- Panel to Aluminum
- Aluminum to Aluminum
- Drilling capacity: .196-.035"

Material: 304 Austenitic Stainless Steel

**TDA PHL Flat Head**

- **#10 Self-Tapping**
- Type A
- No washer
- Cladding Panel to Metal
- Metal to Metal

Material: 304 Austenitic Stainless Steel

Notes

Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
<th>Material Type</th>
<th>Clamping Length (mm)</th>
<th>Head Style</th>
<th>Drive</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
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<tbody>
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<td>SA6 PHL Pan Head 10-16 x 3/4</td>
<td>1269126</td>
<td>SA6/</td>
<td>6-</td>
<td>D9-</td>
<td>PH2-</td>
<td>4.8X</td>
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<tr>
<td>SA6 PHL Flat Head 10-16 x 3/4</td>
<td>1247450</td>
<td>SA6/</td>
<td>6-</td>
<td>–</td>
<td>PH2-</td>
<td>4.8X</td>
<td>19</td>
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<tr>
<td>10-16 x 1</td>
<td>1247448</td>
<td>SA6/</td>
<td>11-</td>
<td>–</td>
<td>PH2-</td>
<td>4.8X</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
<th>Material Type</th>
<th>Drive</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
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<tbody>
<tr>
<td>TDA PHL Flat Head 10 x 3/4 Type A</td>
<td>1247525</td>
<td>TDA-</td>
<td>PH2-</td>
<td>4.8X</td>
<td>19</td>
</tr>
<tr>
<td>10 x 1 Type A</td>
<td>1247523</td>
<td>TDA-</td>
<td>PH2-</td>
<td>4.8X</td>
<td>25</td>
</tr>
</tbody>
</table>

Installation

Fasteners should provide for a minimum of 3 fully developed threads through the metal substrate.

Tools: 0-2000 rpm screw gun equipped with depth sensing nose piece.

Use of impact guns or hammer drills is not recommended.
SSO-D15 Rivet

Attach high-performance cladding panels to aluminum or steel sub-frames

Material
Body: 316 Stainless Steel (A4)
Mandrel: 316 Stainless Steel (A4)

Nom. Tensile: 6500N (1461 lbs.)
Nom. Shear: 5300N (1191 lbs.)

Pull-out Strength-Extruded Aluminum
AlMg 3  2.0mm (0.078”): 2180N (490 lbs.)

Pull-out Strength - 55 KSI Yeild Sheet Steel
18ga. (.048“): 2296N (516 lbs.)

Notes
Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners. Pull-out strength values obtained with 5.1 mm (.0201”) pre-drill.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
<th>Code</th>
<th>Grip Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 x 14mm</td>
<td>1262436</td>
<td>SSO-D15-50140-A4</td>
<td>6.0-9.5 mm (.236-.374”)</td>
</tr>
<tr>
<td>5 x 18mm</td>
<td>1262437</td>
<td>SSO-D15-50180-A4</td>
<td>9.0-13.5 mm (.354-.531”)</td>
</tr>
<tr>
<td>5 x 22mm</td>
<td>1262439</td>
<td>SSO-D15-50220-A4</td>
<td>13.0-18.0 mm (.511-.708”)</td>
</tr>
</tbody>
</table>

Installation
5.1mm (0.201”) pilot hole (#7) required in aluminum framework for fixed point. All other holes depend on material. Check the attachment method instructions provided by the cladding panel manufacturer. Recommended installation tool is the Gesipa Accubird, with special nosepiece for SO.

Accubird® Pro Rivet Gun
Item# 1433447

Nosepiece for SSO
Item# 1291200

Drill Guage (DG)

- Drilling Guage for centered drill holes including drill bit Ø 5.1 mm.

Replaceable top pieces with different diameters available.

Order Code: DG-146x20-7,0 1320657
DG-146x20-8,0 1320658
DG-146x20-9,0 1320659
DG-146x20-10,0 1321704
Can be used in assemblies of dissimilar materials, thick and thin, hard and soft, metal, composites and phenolic panels

- Good installed appearance
- Tamper resistant

- Won't loosen in high vibration and fatigue applications
- Reliable quality and repeatability of assembly
- No over-driving or under-driving
- Available painted to match any panel color

Application

AP16 Rivet
Attach high-performance cladding panels to aluminum

Material:
Body: Aluminum AlMg5
Mandrel: Stainless Steel A3

Nom. Tensile: 3720 N (836 lbs.)
Nom: Shear: 2414 N (543 lbs.)

Pull-out Strength - Extruded Aluminum
AlMg 1.8mm (.071") 2410 N (542 lbs)

Pull-out Strength - 33 KSI Yield Sheet Steel
22 ga. (.030"): 1210 N (272 lbs.)
18 ga. (.048"): 2360 N (530 lbs.)

Notes
Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners. Pull-out strength values obtained with 5.1 mm (0.201") pre-drill.

Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
<th>Code</th>
<th>Grip Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 x 16mm</td>
<td>914963</td>
<td>AP16-50160-S</td>
<td>8.0-12.0 mm (.324-.472&quot;)</td>
</tr>
<tr>
<td>5 x 18mm</td>
<td>870920</td>
<td>AP16-50180-S</td>
<td>9.5-13.5 mm (.374-.531&quot;)</td>
</tr>
<tr>
<td>5 x 21mm</td>
<td>994642</td>
<td>AP16-50210-S</td>
<td>12.5-16.5 mm (.492-.649&quot;)</td>
</tr>
</tbody>
</table>

Installation

5.1mm (0.201") pilot hole (#7) required in aluminum framework for fixed point. All other holes depend on material. Check the attachment method instructions provided by the cladding panel manufacturer.

Options

Painted
### TU-S Blind Fastener

**Fastening HPL cladding panels**

- Enables brackets, straps or clips to be attached quickly and securely to the back of HPL cladding panels
- Cost-effective
- Installation can be performed by one person
- No special tools required
- Can be installed into panels 8mm to 13mm (.31” to .51”) thick

### Application

**TU-S Blind Fastener**

Fasten brackets, straps or clips to the back of panels

**Material:**

Sleeve: Stainless steel (grade 316, DIN 1.4401)

Mandrel: Carbon steel (is pulled off completely, i.e. no residue remains)

### Notes

Dimensions are nominal unless noted. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.

### Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
<th>Code</th>
<th>Bracket Range</th>
<th>Panel Range</th>
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</thead>
<tbody>
<tr>
<td>6 x 9mm</td>
<td>907253</td>
<td>TU-S-6x9</td>
<td>2.4mm (0.08-0.15”)</td>
<td>8-10mm (0.31-0.39”)</td>
</tr>
<tr>
<td>6 x 11mm</td>
<td>778444</td>
<td>TU-S-6x11</td>
<td>0.5-5.5mm (0.02-0.21”)</td>
<td>8-13mm (0.31-0.51”)</td>
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<tr>
<td>6 x 13 mm</td>
<td>848724</td>
<td>TU-S-6x13</td>
<td>2.5-7.5mm (0.09-0.29”)</td>
<td>10-13mm (0.39-0.51”)</td>
</tr>
</tbody>
</table>

### Installation

Pre-drill pilot hole a minimum of 6.5mm deep and 6.0mm diameter. Residual panel thickness must be at a minimum of 1.5mm; check panel manufacturer’s specific requirements. Insert fastener by hand through bracket into pre-drilled pilot hole; remove the mandrel with riveting tool.

Utilize HSS blind hole drill bit, 6mm (0.236”) diameter, with depth stop

Bracket or clips requires a 7 mm (0.276”) clearance hole

An appropriate washer is required with thinner brackets.
**Selection**

**BULB-TITE® Rivets**

BULB-TITE rivets were first developed to solve application requirements in the Pre-Engineered Metal Building industry. Since that time the BULB-TITE product line has been expanded to meet application requirements in a wide range of industries. The BULB-TITE rivet body folds into three separate legs forming a large blind-side head. This large bearing head evenly distributes the BULB-TITE’s clamp force in soft, thin or brittle materials while providing high pull-through resistance. The BULB-TITE’s wide grip range enables a single BULB-TITE to work in a greater variation of thicknesses.

**Aluminum Rivet/Aluminum Mandrel**

<table>
<thead>
<tr>
<th>Head Style</th>
<th>Rivet Diameter</th>
<th>Material No. (no washer)</th>
<th>Material No. (with Washer)</th>
<th>Grip Range</th>
<th>Pre-Drill Hole Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dome Head Protruding Crown</td>
<td>5/32&quot;</td>
<td>1194602</td>
<td>1194603</td>
<td>.067-.250</td>
<td>#20 (.162-.167)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1194604</td>
<td>1194605</td>
<td>.250-.500</td>
<td>#20 (.162-.167)</td>
</tr>
<tr>
<td></td>
<td>3/16&quot;</td>
<td>1194606</td>
<td>1194607</td>
<td>.062-.250</td>
<td>#4 (.209-.221)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1194608</td>
<td>1194609</td>
<td>.187-.375</td>
<td>#4 (.209-.221)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1194620</td>
<td>1194621</td>
<td>.312-.500</td>
<td>#4 (.209-.221)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1194622</td>
<td>1194623</td>
<td>.437-.625</td>
<td>#4 (.209-.221)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1194624</td>
<td>1194625</td>
<td>.563-.750</td>
<td>#4 (.209-.221)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1194626</td>
<td>1194627</td>
<td>.687-.875</td>
<td>#4 (.209-.221)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1242652</td>
<td>1242653</td>
<td>.937-.125</td>
<td>#4 (.209-.221)</td>
</tr>
<tr>
<td></td>
<td>1/4&quot;</td>
<td>1194628</td>
<td>1194629</td>
<td>.062-.250</td>
<td>1/4 (.250-.263)</td>
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<td></td>
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<td>1194630</td>
<td>1194631</td>
<td>.125-.375</td>
<td>1/4 (.250-.263)</td>
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<tr>
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<td></td>
<td>1194632</td>
<td>1194633</td>
<td>.250-.500</td>
<td>1/4 (.250-.263)</td>
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<tr>
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<td>1194635</td>
<td>.375-.625</td>
<td>1/4 (.250-.263)</td>
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<td>1194719</td>
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<td></td>
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<td>1194720</td>
<td>1194721</td>
<td>.250-.625</td>
<td>5/16 (.304-.3125)</td>
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<tr>
<td></td>
<td></td>
<td>1194722</td>
<td>1194723</td>
<td>.375-.750</td>
<td>5/16 (.304-.3125)</td>
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<tr>
<td>Large Flange Prot. Crown</td>
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<td>1194725</td>
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<td>5/16 (.308-.327)</td>
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<td>1194726</td>
<td>1194727</td>
<td>.250-.625</td>
<td>5/16 (.308-.327)</td>
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<td></td>
<td>1194728</td>
<td>1194730</td>
<td>.375-.750</td>
<td>5/16 (.308-.327)</td>
</tr>
</tbody>
</table>

*Continued on following page*
Blind Rivets and Grommets

Selection

BULB-TITE® Rivets, continued

Aluminum Rivet/Aluminum Mandrel

<table>
<thead>
<tr>
<th>Head Style</th>
<th>Rivet Diameter</th>
<th>Material No. (without washer)</th>
<th>Material No. (with Washer)</th>
<th>Grip Range</th>
<th>Pre-Drill Hole Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dome Head Recessed Crown</td>
<td>3/16&quot;</td>
<td>1242668</td>
<td>1242669</td>
<td>.050-.187</td>
<td>#4 (.209-.221)</td>
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<tr>
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<td></td>
<td>1242670</td>
<td>1242680</td>
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<tr>
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<td>1242692</td>
<td>1242693</td>
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<tr>
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<td>1242771</td>
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<td>1242774</td>
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<td>1242796</td>
<td>.080-.375</td>
<td>1/4 (.250-.263)</td>
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<td></td>
<td>1242839</td>
<td>1242841</td>
<td>.250-.500</td>
<td>1/4 (.250-.263)</td>
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<tr>
<td></td>
<td></td>
<td>1242868</td>
<td>1242870</td>
<td>.375-.625</td>
<td>1/4 (.250-.263)</td>
</tr>
</tbody>
</table>

MEGA GRIP® Rivets

The MEGA GRIP is a high strength structural blind rivet offering several advantages over conventional blind rivets. MEGA GRIP’s wide grip range enables a single MEGA GRIP to replace up to five different lengths of standard rivets. High shear strength is achieved by MEGA GRIP’s flush break self-plugging mandrel. MEGA GRIP rivets are hole-filling, resulting in tighter joints and improved sealing for weather resistance. MEGA GRIP rivets are installed via standard rivet tools and do not require special nose tips.

Aluminum Rivet/Aluminum Mandrel

<table>
<thead>
<tr>
<th>Head Style</th>
<th>Rivet Diameter</th>
<th>Material No.</th>
<th>Grip Range</th>
<th>Pre-Drill Hole Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dome</td>
<td>3/16&quot;</td>
<td>1194560</td>
<td>.062-.250</td>
<td>#8 (.194-.204)</td>
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<tr>
<td></td>
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Selection

Extra Length Metric Rivets
SFS intec supplies a complete line of metric blind rivets according to DIN7337 standards in 3mm, 4mm and 5mm diameters. Standard material is Aluminum/Steel. Stainless Steel 304 and 316 alloys are available upon special request. All dimensions for Metric Series are given in millimeters. Additional diameters of 4.8mm, 6mm and 6.4mm available on special request.

Aluminum Rivet/Steel Mandrel

<table>
<thead>
<tr>
<th>Head Style</th>
<th>Rivet Diameter</th>
<th>Material No.</th>
<th>Grip Range</th>
<th>Pre-Drill Hole Size</th>
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<td></td>
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Continued on following page
Selection

PolyGrip® Multigrip Blind Rivets
PolyGrip rivets feature a wide grip range, enabling a single PolyGrip to replace up to three different lengths of standard blind rivets. PolyGrip rivets expand radially, filling the application hole, resulting in tighter joints and improved sealing. The PolyGrip’s locked mandrel core creates a weather resistant fastener. Improved material support is provided by the PolyGrip’s larger blindside head formation. Large flange head style available upon request.

### Stainless Rivet/Stainless Mandrel

<table>
<thead>
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<th>Head Style</th>
<th>Rivet Diameter</th>
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### Aluminum Rivet/Stainless Mandrel

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Continued on following page
### Blind Rivets

**American Standard Blind Rivets**

Standard blind rivets are ideally suited for metal trim applications and other light gauge installations. SFS intec provides a selection of 1/8” diameter rivets painted to match standard industry colors. Other sizes and colors available upon request.

#### Aluminum Rivet/Aluminum Mandrel

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#### Stainless Rivet/Stainless Mandrel

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#### STST43 Blind Rivets Standard Colors

45 Standard Colors

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<td>Ivory</td>
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<td>553</td>
<td>Parchment</td>
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</table>

Other colors available upon request
**Application**

**AccuBird Pro**
18.0 Volt Cordless Riveting Tool

- **Weight**: 4.4 lbs. (2.0 kg with battery)
- **Working Stroke**: 1.0” (25 mm)
- **Traction Power**: 2,200 lbs. (10,000 N)
- **Power Pack**: 18.0 Volt, rechargeable Li-Ion / 2.1 Ah
- **Material Number**: 1433447
- **Battery Charger**: 100-240V/50-60Hz, 45-90 minute charge time

**AccuBird**
14.4 Volt Cordless Riveting Tool

- **Weight**: 4.8 lbs. (2.2 kg)
- **Working Stroke**: .79” (20 mm)
- **Traction Power**: 1,900 lbs. (6,500 N)
- **Power Pack**: 14.4 Volt, rechargeable Li-Ion / 1.3 Ah
- **Material Number**: 0836102
- **Battery Charger**: 110V/60Hz, 60 minute charge time

**PowerBird**
14.4 Volt Cordless Riveting Tool

- **Weight**: 4.8 lbs. (2.2 kg)
- **Working Stroke**: .79” (20 mm)
- **Traction Power**: 2,900 lbs. (13,000 N)
- **Power Pack**: 14.4 Volt, rechargeable Li-Ion / 2.6 Ah
- **Material Number**: 0835558
- **Battery Charger**: 110V/60Hz, 60 minute charge time

**RV24RE**
BULB-TITE Removal Tool

- Designed for use with Aluminum BULB-TITE rivets, the tool greatly simplifies rivet removal in repair operations. The specially ground jaws cut rivet heads off cleanly without damage to the application material.
- **Material Number**: 1195162

*Continued on following page*
Blind Rivets and Grommets

Application

Taurus 1
Hydro-pneumatic Power Riveting Tool
- Nose tips for each rivet diameter are stored in tool’s base.
- Same hydraulic section as the Taurus 2 ensures long tool life and reduced maintenance.
- Suspension loop retracts into tool body.

Taurus 2
Hydro-pneumatic Power Riveting Tool
- New 3-piece jaw design increases jaw life – reducing service costs.
- Integrated mandrel collection system with grip release shutoff – conserves compressed air resources.
- Padded ergonomic tool grip enhances comfort – lowers operator fatigue.

Taurus 3
Hydro-pneumatic Power Riveting Tool
- Taurus 3 is up to 40% lighter than comparable tools in this power range.
- Long working stroke installs multi-grip rivets in a single stroke.
- Reliable exhaust-air mandrel ejection with large collector and safety interlock.

Taurus 4
Hydro-pneumatic Power Riveting Tool
- Taurus 4 offers the high pulling force required for many of today’s 1/4” diameter structural blind rivets.

Taurus 1
Hydro-pneumatic Power Riveting Tool
- Work Capacity: 1/8” ø in all materials
- Weight: 2.87 lbs.
- Pulling Strength: 1,150 lbs. @ 90 psi
- Working Stroke: .590 in.
- Material Number: 1167650

Taurus 2
Hydro-pneumatic Power Riveting Tool
- Work Capacity: Up to 3/16” ø in all materials
- Weight: 3.75 lbs.
- Pulling Strength: 2,500 lbs. @ 90 psi
- Working Stroke: .709 in.
- Material Number: 1195689

Taurus 3
Hydro-pneumatic Power Riveting Tool
- Work Capacity: Up to 1/4” ø in all materials and 9/32” Alum BT
- Weight: 4.19 lbs.
- Pulling Strength: 3,900 lbs. @ 90 psi
- Working Stroke: .984 in.
- Material Number: 1195690

Taurus 4
Hydro-pneumatic Power Riveting Tool
- Work Capacity: Up to 1/4” ø structural blind rivets and 9/32” Alum BT
- Weight: 4.4 lbs.
- Pulling Strength: 5,500 lbs. @ 90 psi
- Working Stroke: .750 in.
- Material Number: 1213032

Continued on following page
### Riveting Tool Installation Guide

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<tr>
<th>Rivet Type</th>
<th>Material</th>
<th>Rivet Diameter</th>
<th>AccuBird Nose Tip</th>
<th>PowerBird Nose Tip</th>
<th>RV 74G Pulling Head</th>
<th>Taurus 1 Nose Tip</th>
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* Tool will install rivet
* Kit Nose tip included in tool kit
* A Nose tip 1195161 and shorter jaws 1195156 required
* B Nose tip 7251583 and jaw pusher/reducer tube 7243294 required
Grommet Fasteners

- Allow for one side attachment of fiberglass panels through a pre-drilled hole.
- Designed to pull fiberglass panels together without cracking the material.
- Come assembled with EPDM washers for a weather tight seal.

Application

Grommet Fasteners

Materials:
Neoprene rubber
w/molded brass nut

Size 3/8" Grommet
Material No.: 1204129
Code: GROM-S3-3/8-B
Fastener: 10-32 x 7/8" stainless
5/16" AF Hex Head
Washer: 15 mm O.D stainless Bond Seal

Size 1/4" Grommet
Material No.: 1297523
Code: GROM-S3-1/4-B
Fastener: 6-32 x 1-1/4" stainless
1/4" AF Hex Head
Washer: 12 mm O.D stainless Bond Seal

Notes
Dimensions are nominal inches unless noted.

Options

Painted
**Drive Bits**

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**irius® Drive Socket**

The E-420 setting tool is required for installing the irius® drive system

The fasteners are clamped firmly via the teeth under the fastener head.

How to use the E420 socket for irius® fasteners

a) Pull out the Jaws of the socket
b) Insert the irius® (L12) head style fastener
c) Setting process
d) Pull back tool to open socket chaws